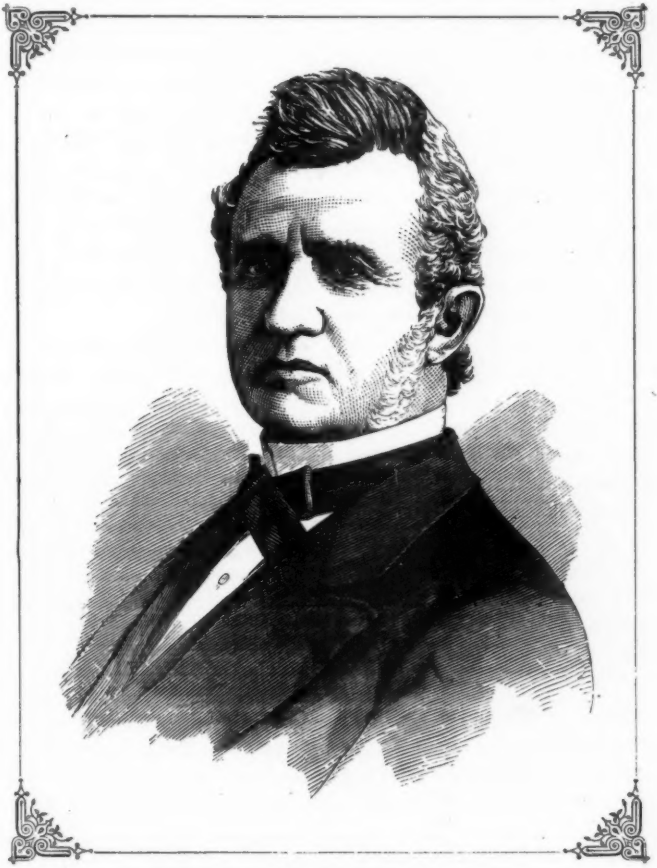
THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED.

VOL. 66. 1878.

NUMBER 6.] *June, 1878.* [WHOLE NO 474



HORACE A. BUTTOLPH, M.D., LL.D.,

SUPERINTENDENT OF THE NEW JERSEY ASYLUM FOR THE INSANE.

THIS gentleman has inherited his organization in great part from the mother's side, which evidently was distinguished for long life and enduring power. There is a

certain smoothness in his organization, an ease of working in its different parts that promotes long-continued action and remarkable endurance. We may say here that endurance depends as much upon the easy, harmonious working of different parts as upon their essential strength. A wagon wheel built symmetrically, its members being fairly balanced so that there is no stiffness on one side to counteract or oppose the elasticity of the opposite, will wear evenly and last longer than a wheel whose parts are unequal in regard to elasticity and strength. That which is true of the body in reference to the freedom and harmony of its mechanism, is true of the brain. Some men have so much Combativeness that they are always in a fever, or so much Caution that they are always in dread, or so much Reason that they are continually struggling with some problem, and they are thus rendered uneasy and fidgety, and they live, move, and work with more friction than is compatible with great endurance and large accomplishment.

Here we find large lungs, good digestion, and a fair circulation. These physical elements contribute to the harmony of the mental action. He should be known for firmness; for the disposition to pursue with earnest directness a chosen course; though he may be compelled to stop in his course by some unlooked-for obstruction, he can adapt himself to the contingency, and when the obstruction has been removed, go on to the completion of the work.

He has enough of Combativeness and Destructiveness to back up his Firmness, and in certain relations might be inclined to show strong feeling or temper—not that of a boisterous sort, but in the way of increased energy and a more emphatic earnestness. Were he performing an operation in surgery, he might sympathize warmly with the suffering patient, but would use the knife with a strong and steady hand, and be thorough in its performance. When placed where severity is absolutely essential in matters of discipline, he is not the man to hesitate to apply it.

His Secretiveness enables him to conceal his purposes, and to maintain good control over his feelings. He has Caution enough to be watchful, guarded, and provident, and this element in his composition enables him to preserve his tranquillity. He believes in justice; it supplements strongly his firmness and forceful qualities, and so gives sanction to his purposes. He may be considered exacting at times, particularly where questions of integrity and faithfulness are concerned. He would be likely to take more pains to pay five cents than most other men would to pay five dollars which was due another.

His love of praise or sense of appreciation is exceedingly strong. He feels criticism and censure keenly; yet he has a good degree of Self-esteem, which enables him to preserve a dignified bearing if thus assailed; his Conscientiousness working with his Approbativeness renders him anxious to maintain a good reputation before the world.

We do not find the evidences of much credulity; he is inclined to hold new, strange, and wonderful things at a distance; to demand evidence for what is pressed upon his acceptance.

He is a good reader of character. His impressions of strangers are generally well-founded. He has large Constructiveness; is a natural inventor, planner, and organizer; would have done well as an architect, machinist, or manufacturer. Had he taken up some specialty in surgery, like the treatment of the eye or ear, he would have shown superior skill; would have made discoveries and acquired reputation.

His large perceptives qualify him to gather knowledge and hold it until it can be applied to use. He has an excellent memory of particulars; can carry complex affairs very clearly in mind. With that large Constructiveness and that specializing intellect and discriminating judgment, he is well adapted to the superintendence of an extensive manufacturing establishment, with its world of associated machinery—he could carry all its details clearly in mind without confusion. His power and success are largely due to his mechanical and inventive talent, which not only enable him to understand material affairs, but also the complicated relations of human disposition and character, thus enabling him to govern and control people.

His Language is large enough to make him a good talker—not one very fluent or copious in the use of words, but one able to express himself with clearness, precision, and comprehensiveness.

HORACE A. BUTTOLPH was born on the sixth of April, 1815, in the township of North-east Duchess County, New York. His father, Warren Buttolph, although a native of New York, was of German descent, the founder of the American branch of the family having emigrated from Germany when quite young and settled in Boston, Massachusetts. His mother was of Irish lineage. When Dr. Buttolph was but a youth his father moved to Pennsylvania and settled within four miles of the present thriving city of Scranton, which was then known as Slocum's Mill, a sparsely inhabited region. The family did not remain long in that place, but in a few years returned to Duchess Co., New York, where Horace attended school until he was fourteen years of age. He subsequently became an inmate of the family of a maternal uncle, Dr. Charles McAllister, of South Lee, Berkshire Co., Massachusetts. While residing with his uncle he became a pupil of the Stockbridge Academy, where he completed his early education.

Having resolved to devote his life to the medical profession, he commenced its study under the preceptorship of his uncle, and, meanwhile, in order to defray the expenses incident to his medical studies, he taught school. In this way young Buttolph sustained himself almost from the beginning of his career; his self-reliant nature declining the assistance of others. He attended three regular courses of lectures at the Berkshire Medical College, and was graduated from that institution in 1836. Returning to his father's house he began at once the practice of his profession, but remained in Duchess County for a brief space only, going to Sharon, Litchfield Co., Connecticut, which was his place of residence for five years. He then came to New York city and attended a course of medical lectures in the University, giving special attention to surgery.* Some time previous to this he had become deeply interested in mental science and in the treatment of insane patients, looking into these subjects with much care. When the asylum at Utica, N. Y. was about to be opened in the winter of 1842 Dr. Buttolph offered to become one of the medical staff. With this position in view he visited the leading asylums of New England, and after returning from the tour, was appointed assistant to Dr. Brigham, who had been called to take charge of the Utica institution. This post of duty he occupied for about five years, leaving it to take the superintendency of the New Jersey State Lunatic Asylum at Trenton. Before accepting this responsible position, however, he visited many of the leading asylums for the insane in Great Britain, France, and Germany—in all, thirty institutions—so that he was enabled to prosecute his work at Trenton with a very complete understanding of the methods to be pursued. From the first he gave much satisfaction, and during the

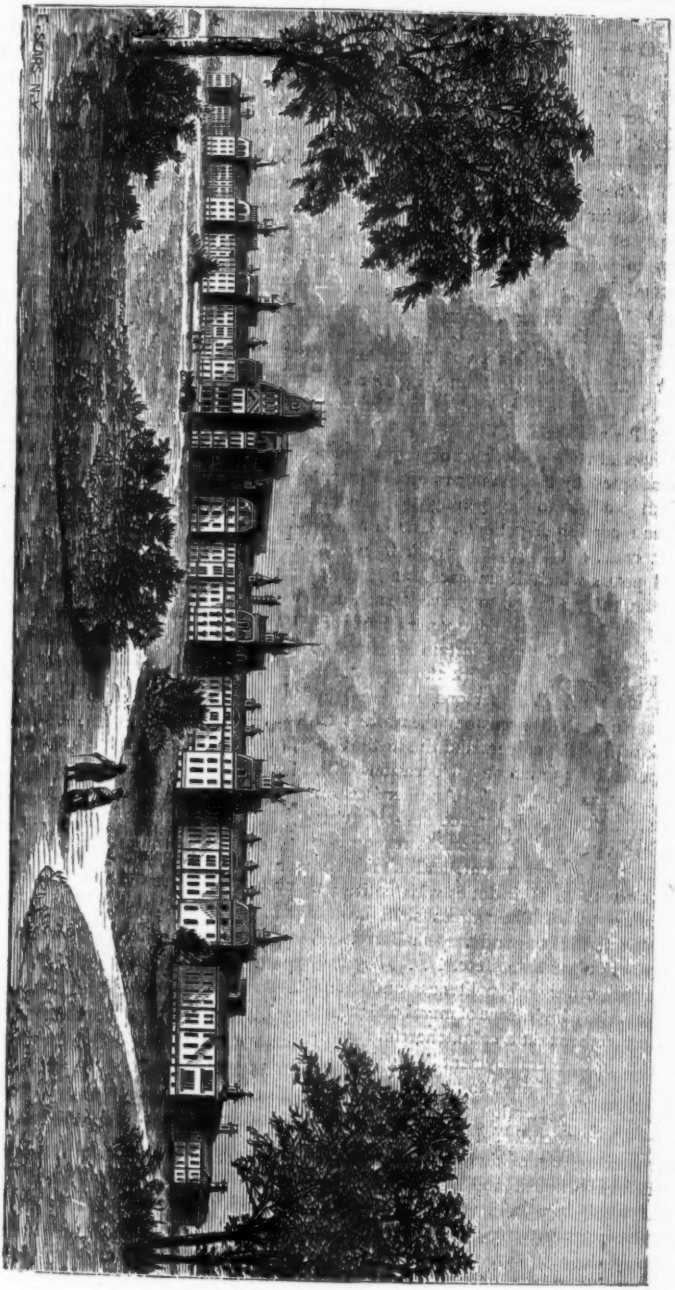
* It is fitting to mention that while Dr. Buttolph was in New York at this time, finding Mr. O. S. Fowler suffering from an attack of small-pox, he volunteered his assistance at the bed-side, and to his personal watching and care all of one night when the disease had reached its most critical stage, Mr. Fowler has often acknowledged his recovery from the fell malady.

twenty-nine years that he was connected with that institution, it can be said without any attempt at flattery that Dr. Buttolph contributed more than any other man in the State to the introduction and development of the methods and facilities which are in use there for treating the insane.

In April, 1876, he was called to take charge of the new State asylum at Morristown, to which he had been elected in June, 1875. He had been appointed some years before by the Legislature of New Jersey a member of a commission created to select a site, and to prepare plans for the building, arranging, and furnishing of the colossal institution over which he is now superintendent. The work of erecting this building—or, rather, series of buildings—was begun in 1872, and about two and a half million dollars have been expended upon it.

As shown in the accompanying engraving, this institution is very imposing in appearance, especially when viewed from the front, which stretches out in a continuous line from east to west over 1,270 feet, each subdivision receding until the rear of the two extreme wings, which inclose a square court, are about 600 feet distant from the front line of the central projection. All the buildings are fire-proof as far as stone, brick, iron, and slate can make them. The principal stairways in the wards are of iron and slate. The buildings are generally five stories high, including the basement, the upper story being finished with a Mansard or French roof ornamented with turrets and cupolas. The central edifice is trimmed with Pictou and Nova Scotia stone; the wings with freestone from the Newark quarries—the whole presenting a very substantial and imposing appearance. To describe appropriately the buildings in detail would occupy far more space than could be afforded here. They must be seen—both inside and outside—to be appreciated. Every contrivance or facility known to science has been brought into requisition for the proper warming, ventilating, feeding, and lodging of the patients. The asylum in its present condition is intended to receive eight hundred patients with their attendants. The departments are heated by steam, for the supply of which, as well as the power needed to run the machinery of the shops, laundry, etc., are eight large boilers in a suitable building, placed at some distance in the rear of the central structure. It may give some idea of the great extent of the edifice to say that there are nearly eight acres of floors, over thirteen miles of base board, two thousand doors, twenty-five hundred windows, and an area of plastered wall somewhat over thirty-three acres. There are between four and five thousand radiators and about three thousand registers connected with the heating apparatus, together with something like eight miles of iron pipe for the conveyance of steam, water, and gas. The gas used is made on the premises in a separate building. The visitor who passes through the many passages of the basement and views the lines of iron pipe, will be at first bewildered by their apparent complexity; but after a few moments of examination, especially if he be conducted by the superintendent, whose comprehension of the building with all its infinitude of detail is perfect, he will be astonished to perceive how simple the system is which has been brought into use.

Corridors connect all the sections or departments. Every ward has been planned so that an abundance of sunlight is obtained through large windows directly to every chamber. Besides, these windows command views of open courts or extensive stretches of lawn and meadow planted with trees, supplied with seats, summer-houses, etc. The front windows overlook an extensive scenic panorama which at this season of the year is most charming. A beautiful chapel seventy-one by thirty-seven feet, with a ceiling thirty-six feet high, stained glass windows and elegantly embellished, is one of the chief features of the internal arrangements. Besides this there is an amusement hall fifty-nine by forty-seven feet, fitted up with stage and scenery for tableaux and other representations. There are also reading-rooms, pianos, and games; in fact the whole interior shows that judicious hands have provided for the moral and esthetical wants or teaching of the un-



VIEW OF BUILDINGS OF THE NEW JERSEY STATE ASYLUM FOR THE INSANE.

fortunate inmates as well as for their common physical necessities.

Dr. Buttolph has devoted himself to his profession with enthusiasm; and, as has already been shown in our brief biographical sketch, the care of the insane has been a life-long study with him—indeed a sphere in which he has found enjoyment because of his peculiar adaptation to it, and the large measure of success which has attended his efforts to restore diseased minds to a normal condition.

In 1872 he was honored by Princeton College with the degree of LL.D. He has been twice married, his present wife being the daughter of the late John Syng Dorsey, M.D., Professor of Anatomy in the University of Pennsylvania.

A special code of by-laws or regulations was adopted by the managers of this new asylum previous to the opening of its doors for the reception of patients. One in reading it could not fail to be struck by many novel points which it embraces, and which are admirably adapted to prevent such unhappy occurrences as newspapers have of late reported concerning certain institutions for the insane in New York and elsewhere. One rule runs, "All persons employed in the asylum shall accustom themselves to speak well of the officers and the institution and treat the former on all occasions with politeness and respect." Another section contains, "In the first place self-respect is enjoined upon all. Each one is responsible in his or her department, and should be ambitious to do their duties with entire acceptance. . . . . Their dress shall always be neat and clean, and they shall avoid all coarse or vulgar habits, etc. . . . They shall treat each other with politeness and attention, cherish a high sense of moral obligation, and remember that a calm, cheerful deportment befits their employment." Again, "Attendants are enjoined to treat the patients with uniform attention and respect, greet them with a friendly salutation, and exhibit such other marks of kindness and good-will as denotes interest and sympathy. They shall speak in a mild and persuasive tone of voice, and never address a patient coarsely or by a nickname. When attendants receive insults and abusive language, they must keep cool and forbear to recriminate, threaten, or dictate in language of authority. *Violent hands shall never be laid upon patients under any provocation, and a blow shall never be returned.*"

A considerable proportion of the patients—both male and female—are employed in the different branches of labor incident to the asylum. The visitor will see men actively serving in the garden, on the grounds, in the bakery, laundry, or shops; he will see women efficiently assisting in the laundry, kitchen, sewing-rooms, etc., and may not at the first glance discover that they are reckoned among the patients. Indeed, the nicely-adjusted system which thus utilizes abilities which even those with unbalanced minds possess often in a marked degree, is one of the most efficient of remedial agents.

Dr. Buttolph accepts the composite structure of the brain and appreciates the necessity of varied employments for the exercise of the different organs and faculties of the mind. In his report of the first year's work in the new asylum, dated November 1st, 1876, he states: "Back of the consideration of mental and moral causes, however, which may be in a given case very important or extremely trivial in their character and influence, it should be known and admitted, in order to a right understanding of the subject and the expression of enlightened views in regard to insanity, that the brain is not only in a general way the organ of the mind, or the agent by or through which its faculties are manifested in this life, but that its regions and parts are related through their functions to classes and individual faculties of the mind; and that all attempts, while denying or ignoring this cardinal fact or relation between the two, to profit greatly by pathological inquiries into the condition of the brain, will be greatly disappointing or even futile and worthless, as it regards an improved or better adapted system of medical, mental, and moral treatment of the disease."

We are not aware of any other person whose record as a physician to the insane entitles him to a higher place in the world's esteem then Dr. Buttolph, and the State of New Jersey has reason to be proud of the magnificent edifice which she has erected for the care of her unfortunate citizens who have lost their mental balance, and of the man who presides over the vast array of instrumentalities, moral and physical, which have been marshaled therein.

BRAIN AND MIND.

CHAPTER V.—*Continued.*

SECRETIVENESS.

THE organ of this propensity is situated in the region of the brain, bordering on the central part of the inferior edge of the parietal bone, immediately above Destructiveness. (See Fig. 17-10). As its name implies, it gives the disposition to conceal within the mind, its thoughts, feelings, and purposes. In its normal activity, this faculty exercises a judicious restraint upon the other faculties, until the intellect shall have had opportunity to judge of the propriety of their manifestation. Every faculty tends involuntarily to activity, on the presentation of its natural stimulus. Thus, Amativeness, Combativeness, Self-Esteem, and Love of Approbation, becoming active, give rise to their appropriate feelings; and if outward expression were allowed to these on all occasions, society would be disfigured by a muddle of rude and disgusting improprieties. "A fool," says Solomon, "uttereth all his mind; but a wise man keepeth it till afterward." In the common affairs of life a reasonable endowment of this faculty is essential in almost every undertaking. It confers the prudent disposition of keeping our affairs to ourselves, when nothing would be gained by communicating them.

Where the organ is small, the individual will be frank and outspoken, and characterized by a deficiency of tact. He will say many things, on the spur of the moment, which he will afterward wish unsaid, and frequently be otherwise embarrassed by his openness.

On the other hand, when the organ is unduly active, it gives a love of intrigue and concealment for their own sake. Such an individual will be sly, artful, treacherous, and deceitful, if the faculty be not held in check by compensating sentiments. It is usually large in thieves, its ill-regulated activity producing the capacity for sly cunning, which distinguishes that class of rogues. It was large in the woman Gottfried, who is quoted by many authors, and co-operated with her large Destructiveness; she murdered by poison—a mode of committing the crime usually employed by secretive offenders against law and humanity—both parents, her children, two husbands, and six other

Fig. 25.—SECRETIVENESS LARGE.

persons; and she still further manifested the activity of this faculty by feigning the most poignant grief at the bedside of her victims, while she was in reality gloating over their protracted suffering.

It was very large in Warren Hastings of East Indian infamy. In diplomatists and statesmen of eminent sagacity it is large, while in men of marked philanthropic disposition it is usually small. In Fig. 24 it appears small.

This faculty is well shown in the broad heads of many of the lower animals, especially the feline, among which

are the cat, fox, tiger, etc.; giving them the slyness which they possess in the mode of taking their prey. The fox is noted for his cunning, and his head is very broad in the region of this organ.

ACQUISITIVENESS.

This organ is in the temporal region of the brain, its place corresponding with the antero-inferior angle of the parietal bone (See Fig. 17-9). It lies directly in front of Secretiveness. By taking the middle of the top of the ear as the starting-point, and moving the finger vertically about an inch, and then forward an inch, its position on

Fig. 26.—Acquisitiveness Large.

the living head will be ascertained with a good degree of accuracy.

Animated nature has many members below man, which, like the squirrel, the bee, and the ant, are distinguished for their instinct to accumulate and hoard what serves them as food. So man, as the microcosm, possesses an innate faculty which is analogous to that instinct. In Acquisitiveness we have the mental organ which is adapted to man's needs in a world where provision for his daily physical wants is not supplied by nature continuously; but where it is necessary to store up during the time of harvest enough to supply his wants, while the earth is wrapped in snow, and can yield him no support. He is also liable to casualties and sickness, which disable him for making individual exertion for his maintenance. Old age, too, if he live, will bring upon him weakness and infirmities; and unless he makes proper provision for these times of incapacity, he will be subjected to much suffering. In its normal activity this faculty leads to the storing up of the surplus after present wants have been supplied. It prompts to frugality, diligence, and economy, and is thus the source of wealth and all its attendant advantages. It is, however, a mere propensity to acquire and accumulate. What direction it will take depends upon its combination with other faculties; it may manifest itself in a disposition to make collections of books, works of art, or specimens in natural history; but as wealth is the means of gratifying the greatest number of our most active desires, it is usually manifested in the accumulation of property.

When unduly active, it produces the niggardly, parsimonious spirit, which refuses all calls of charity, however urgently expressed, higgles over every expenditure, and stints itself in the use of the comforts of life, that it may heap up treasures far beyond its capacity to use or enjoy.

When deficient, on the other hand, it leads to prodigality and improvidence. The individual will then live from "hand to mouth," spend as he goes, and take no thought for the future. If he have abundance, he will be wasteful and extravagant, and if he be stinted, he will accommodate himself as best he may to his circumstances. He will be dependent all his life long upon his daily labor for daily bread, and in the feeble-

ness of age will come upon his friends or the town for support. In Figs. 24 and 31 it is small.

From finding this organ uniformly large in thieves, Dr. Gall unfortunately named it the organ of theft. But it is only when combined with large Secretiveness and deficient Conscientiousness, and lacking other moral perceptions, that it produces the thievish character. Giving an instinctive desire to possess, the strength of the desire will be measured by the size of the organ, and where there is a deficiency of the moral and restraining powers of mind, this propensity may manifest itself in taking the property of another, wherever it may be found, without any regard for right or justice.

Kleptomania doubtless arises from the inordinate or diseased activity of this organ. There are not a few persons, if we credit the criminal reports published by our daily newspapers, who are, to use the language of Dr. Rush, "moral to the highest degree as to certain duties, but who nevertheless live under the dominion of some one vice." In this connection, he relates an instance of a woman who was exemplary in her obedience to every command of the moral law, except one—she could not refrain from stealing. What made this vice the more remarkable was, that she was in easy circumstances, and not addicted to extravagance in anything. Such was the propensity to this vice, that when she could lay her hands on nothing more valuable, she would often at the table of a friend fill her pockets secretly with bread. She both confessed and lamented her crime.

Men distinguished for business capabilities and the acquirement of wealth have large Acquisitiveness. This was the case with Mr. Girard, Mr. Astor, and Mr. Stewart. George Peabody also possessed a conspicuous development of the organ.

In the lower animals this faculty is very clearly manifested by some, and by others not at all. The squirrel stores up provisions in the hollow of a tree, that he may have the means of sustenance when the natural sources of his food supply are sealed up by the frosts of winter. Our domestic animals, on the other hand, make no provision for the winter whatever, and would starve during its continuance but for the providence of man. If a quantity of corn were thrown down to a squirrel and a hen, the latter would eat of it until her

Fig. 27.—Lavater. Individuality Large.

appetite was satisfied, and then walk off, entirely indifferent as to what became of the remainder. The squirrel, however, would scarcely wait to satisfy his present hunger, until he had carried the whole to a place of safety, where he could draw upon it in the future. The squirrel thus distinctly shows a faculty of which the hen is destitute, and which instinctively prompts it to store up for future use the surplus of the present.

Among the extreme instances of the morbid development and activity of this faculty among men, are those of Burke and Hare of Edinburgh, who murdered people for the sake of selling their bodies to anatomists. In the case

of Burke, the organ of Benevolence is fairly developed, being conspicuous in a moral organization generally low; and it is said that he could not bring himself to the point of killing his victim, unless excited by alcohol. In persons eminent for charitable labors and self-sacrificing philanthropy, Acquisitiveness is usually small.

CHAPTER VI.

OF THE INTELLECT.

THE faculties composing this order take cognizance of the existence, qualities, and relations of external objects.

Fig. 28.—FORM LARGE.

They correspond with the "knowing faculties" of the metaphysicians. First, we would call the reader's attention to the Perceptive group, of which one of the most important elements is

INDIVIDUALITY.

This organ is situated in the first frontal convolution, at the anterior extremity of the frontal lobe, and lies contiguously to that part of the cranium immediately above the root of the nose. (See Fig. 17-1). It imparts the disposition to examine things as individual existences, without any reference to their qualities or purposes. Dr. Gall first named it the Sense of Things, and Dr. Spurzheim subsequently called it Individuality. It is the specializing faculty, taking cognizance of things—a tree, a house, etc., as a simple existence. The other perceptives give us our notions of the qualities of objects, as their form, size, weight, color, etc. Individuality may be termed the *noun*, or object faculty; while Eventuality is the *verb* faculty, and specially concerned with the movements, changes, and history of objects.

The great differences in the power of observation exhibited by men, de-

Fig. 29.—FORM SMALL.

pend chiefly upon the development of this faculty. Some are able to give an accurate description of objects which they have seen in their daily movements; and others can scarcely afford an hour's entertainment in recounting the things which they have observed in a month's travel.

Through its power of individualizing, this faculty is an important element in a practical character, supplying the disposition to attend to the details and minutiæ of a subject. Those writers and artists who have it

well developed, are able to give a distinctness and vividness to their conceptions, which never fail to command attention. Robinson Crusoe and Gulliver's Travels may be instanced as books remarkable for distinctness of detail in narration; and in the heads of De Foe,

Fig. 30.—Size Large

Swift, and also of Dickens, this organ was greatly developed.

When large, Individuality imparts projection and breadth to the part of the forehead between the eyebrows, and in those persons who have it small the eyebrows are near each other, and the centre of the forehead appears compressed. In Fig. 21 it is of moderate size.

FORM.

The place of this organ is contiguous to the *crista galli*, directly below Individuality, just over the inner angle of the orbits (See Fig. 17–F), and its size bears relation to the space between the eyes. When large, the eyes are wide apart, and the eyeballs appear to be pressed downward and sidewise.

Dr. J. P. Browne, of Edinburgh, says, "There may be a great distance between the eyes, with no great development of the Form, because the ethmoid bone is sometimes very broad, and the eyes consequently much separated; but in such a case the indications of brain development in that region differ in such manner that the phrenologist who is conversant with cranial anatomy, can generally determine the true condition."

It is the function of this organ to take note of and remember shapes and configurations. Dr. Gall named it the organ of Knowledge of Persons, because he invariably found it large in those who possessed a special aptitude for remembering faces. In his own head this organ was very deficient, and he could with difficulty remember the countenance of a stranger who had sat next to him at table, so as to recognize him afterward.

It is said of Cuvier, that the form of an animal or a bone, once seen, never left him, but was always present in his mind for comparison with objects of a similar nature which might afterward come under his observation. He was thus enabled to make his wonderful discoveries in comparative anatomy.

Fig. 31.—Size Small.

This faculty is essential to the draughtsman, portrait-painter, the designer, and to all occupations which have to do with a knowledge and judgment of shape. In Michael Angelo it was extraordinarily large; in William

Cobbett, the English author, it was small, and but moderate in Byron.

The Chinese are remarkably endowed with this faculty, which corresponds with their well-known mechanical dexterity and capacity for mastering a language which has a different character for nearly every word.

Fig. 39.—Weight Large.

In animals this faculty gives them the ability to distinguish their masters, or those who have been kind to them, and to remember them even after a separation of years. All the animals of a herd know each other, and it is said that when a strange bee undertakes to introduce himself into a hive, composed of from twenty to eighty thousand bees, he is recognized, and driven out or killed. Children with large Form learn to read much more easily than those in whom the organ is small, and are better adapted to the ordinary mechanical trades than the latter.

SIZE.

The size of a thing is obviously a quality very different from its form. Two eggs, for instance, may be exactly alike in form, but differ greatly in size; and as one of these kinds of knowledge may exist without the other, it is not unreasonable to suppose that they may originate in different cerebral organs. This fact has been demonstrated by numerous observations, which have established the location of an organ, called Size, adjoining Form, on each side of Individuality, at the internal extremity of the arch of the eyebrow. (See Fig. 17–S). Its function is to give the idea of dimension, distance, and space in general. It is essential to the landscape painter and the draughtsman, and to skill in all occupations which have to do with dimension, distance, and perspective.

A tutor in the family of Sir George Mackenzie once said to Mr. Combe, while looking at a landscape: "That seems to me a plane surface, exhibiting difference of light and shade. Now, I am told that to some people different parts appear at different distances, and that to them it appears to have a fore and back ground." He attributed his inability to see the landscape as other people to his want of mathematical education; but an examination of his head, revealed the fact that the organ of Size was decidedly lacking.

On the other hand, in Mr. Douglas, a landscape painter, this organ was very large, and when a mere child, he was so struck with the apparent difference in the width of the near and far ends of the ridges of a plowed field, that he crawled across it, before he could well walk, to measure the actual distance with a stick, and was greatly surprised to find that no difference existed.

In the casts from the heads of Newton, Herschell, and George Law, this organ is conspicuous; and it will be found well marked in the foreheads of men who have acquired reputation as engineers and builders.

WEIGHT.

This organ lies next to Size in the frontal convolutions, and its place

on the superciliary ridge is about one-third the length of the ridge, outward from the root of the nose. (See Fig. 17–W). It is to the reasoning and investigation of Dr. Spurzheim that the discovery of Weight is due. When large, it gives an overhanging appearance to the brow at this point. The weight of bodies is a quality quite independent of form and size, since objects may be alike in these respects, but differ greatly in their specific gravity. Man and the lower animals possess an instinctive capability for adapting their movements to this force, so that whether walking or running they are able to preserve their equilibrium; and this capability arises from this organ. Hence, its function may be defined as the sense of force or resistance, exerted by, or belonging to, external objects.

The organ is always large in acrobats, rope-dancers, and good skaters, as well as in those who have a natural aptitude for constructing and managing machinery in motion. It is essential to the billiard-player to enable him to adapt the force with which he propels the ball, to the effect which he aims to obtain; to the sculptor, that he may correctly estimate the power of his blows upon the marble; to all artisans, indeed, whose success depends upon bringing power to bear with precision and delicacy.

As an instance of the diseased activity of this organ, Mr. Simpson refers to the case of John Hunter, the celebrated anatomist, as it is recorded by his biographer, Sir Everard Home. "From great anxiety of mind," says he, "Mr. Hunter had a severe illness. It attacked him on a journey, and his first sensation, it is well worthy of remark, was that of having drunk too much, although he had taken nothing but a little weak punch. On going to bed he felt as if suspended in the air, and soon after the room seemed to go round with him very rapidly. This ceased, but the strange sensation of being lifted up continued; and on being brought home in his carriage, his sensation was that of sinking or going down. The symptoms of whirling and suspension increased; and his own head, when he raised it from the pillow, seemed to move from him to some distance with great velocity. When he became able to stand without being giddy, he was unable to walk without support; 'for,' says Sir E. Home, 'his own feelings did not give him information respecting his centre of gravity, so that he was unable to balance his body and prevent himself from falling.'"

COLOR.

The situation of this organ is next to that of Weight, and at the middle of the superciliary ridge. (See Fig. 17–C). When large, it gives an arched and projecting appearance to both lower sides of the brow. It is a matter of common observation that there are great differences among men in the ability to perceive and appreciate colors. Where a deficiency of this sort exists, it is referred by some metaphysicians to a want of association, or early habits of inattention. Others conceive that it arises from some defect in the retina, or in the humors of the eye. But it is difficult to conceive how early habits of attention and inattention should cause the great diversity which exists in the power of judging colors; and so far from its being referable to the eye, it is remarkable that deficiency in the power of distinguishing colors exists with acute vision and a correct appreciation of the other qualities of material objects. Phrenologists have observed that the power to discriminate colors

bears a direct relation to the development of a certain part of the brain, which is indicated externally, as above described. The function of the ear is limited to the reception of sounds; but the organ of Tune takes cognizance of their discord or harmony. So the eye perceives external objects merely as such. By means of the organ of Form, we receive our notions of their shape; by the organ of Size, our idea of their magnitude; and by the organ of Color, our conceptions of their hue.

Many persons are so constituted as to be unable to perceive any difference

Fig. 34.—Color Large.

in color between red or pink flowers and fruit, and the green leaves which surround them. Others confound orange with green, red with brown, blue with pink, and indigo with purple. Mr. Combe mentions the case of Mr. Milne, a brass-founder of Edinburgh, who in early life was apprenticed to a draper, but was obliged to give up the occupation on account of the many mistakes he fell into in regard to colors. At one time he was selling a piece of corduroy, and the purchaser requesting strings to match, he proceeded to cut off what he thought corresponded in color. The customer, however, stopped him, saying that the colors were not the same. Mr. Milne requested him to choose for himself, and he did so, selecting a different piece. So confident was Mr. Milne that the customer had made a wrong selection, and that his own was right, that he cut off pieces of the cloth, and the strings, which he and the customer had selected, and carried them home to his mother. She immediately told him that his ribbon was a bright scarlet, while the color of the other ribbon and of the cloth was grass-green. Fig. 31 shows the organ small.

The organ is generally larger in women than in men. Painters, and those who excel in selecting and arranging colors, invariably have it large. The portraits of Durer, Rembrandt, Vandyck, Reynolds, and West show it large. Some artists excel in drawing, but are poor in color, and their efforts to excel in painting are hampered if not rendered futile by this organic defect. In those who were born blind Color is usually quite small. Mr. S. R. Gifford and Mr. E. Johnson, well-known artists in America, have the organ well marked. So, also, has Millais, the English painter.

Color Blindness.—Color blindness is still the subject of much discussion in Europe, with somewhat surprising results. On one French railroad 1,050 men, from 18 to 50 years of age, were examined from July, 1873, to October, 1876, on objects of color—violet, green, blue, yellow and red. 98, or nearly ten per cent., mistook at least one of these colors. The errors made: Concerning violet, 78; blue, 50; green, 54; yellow, 14; red, 10. 29 gave correct answers "after repeated hesitations," and eight corrected mistakes afterward. Only 11 of the whole number were rejected for color blindness. If the scientific gentlemen will bear in mind the relation of this infirmity to the brain their investigations will be of important service.

LIGHT IN DARK PLACES.

"This mournful truth is everywhere confessed,
Slow rises worth by poverty depressed."—SAMUEL JOHNSON.

CHAPTER XXVI.

IN THE HOUSE OF WEALTH.

"SHURE an' ye didn't mate that sewin' gurrl who's afther comin' here so often?" asked Mrs. Moriarty, accosting the widow as she ascended the steep stairs on her way to her apartments.

"You mean Betty Sniven, I suppose?"

"Yis; but it's meself thinks ye didn't, bekase she was here twinty minutes an' more since."

"Did she wish to see me about anything in particular?"

"Shure an' the poor gurrl towld me that she'd been discharged and had no worruk at all at all, for two or three days."

"I'm very sorry to hear that."

"Yis, I was meself, for she's a good crather, and them's that's depindin' on her will be findin' its a hard case. But she was afther sayin' that she'd come to you for a word of advice, and she know'd she'd git a bit of encouragement; shure an' its thrue enough as I'd go bail for mesilf."

"I sometimes feel like despairing, Mrs. Moriarty, when I hear of the thousands who are without employment and entirely destitute and friendless. The poor Snivens, I must try to think of something in their behalf."

"Ah, that indade ye can, Mrs. Camp. It's a wonderful way ye have uv thinkin' for other people. She said she'd be in agin, and tell ye about matthers, hersilf, this evenin', maybe. But I'll not kape ye any longer; shure an' it must be on the stroke ov twilve, an' ye have yer dinner to git, an' mine is not half riddy, an' me ole mon 'ill be here purty soon."

Mrs. Moriarty bustled up-stairs and left the widow to pursue her own course with respect to dinner and the other matters of her household.

That evening Betty came and consulted with her friends, for as such she regarded them, especially as the withdrawal of Sadie from the bindery had made no change in the cordial interest of the latter toward her old shop companion.

"I do not see any other course just now for you but to apply to the Guardian Society," said Mrs. Camp, after Betty had recounted with what utter want of success she had applied at many shops and stores for work. I will give you a note certifying to your worthiness."

"Thank you, Mrs. Camp. Indeed I'm just ready to do anything. If I could get a place in a family I'd do it, ter wash or scrub, or anything, ruther'n be dependent on charity."

"I know it, Betty. You have an honest, workful disposition, and it pains me to see you and yours suffering, when so many lazy, careless people who appear to detest sober, productive labor, are lolling in comfort and profusion."

The widow spoke in a tone of so much emphasis that Sadie looked at her with surprise, and remarked: "Betty likes children, you know, mother dear. Perhaps a place might be found where she can be a nurse and seamstress."

"Yes, marm, that I'd like. Me manners are a little rough, I'll confess, but I'd try hard to do me duty."

"There can be little doubt on that score, my good girl. Something may offer in the way of employment sooner than you expect. Keep your eye and your thought on the sunny, hopeful side of your condition."

"I'll try to, Mrs. Camp."

Bidding her friends good-night, Betty went home, but not empty-handed, for with the widow's cheering words she carried a jar of apple-jelly and a dozen of fresh biscuits.

Two days afterward Mrs. Price's coachman rapped at the door of the Camp apartment, and handed to the lady who opened to him a dainty missive inviting her to come at once to the aristocratic mansion

which served as the home of the Price family. Mrs. Camp rapidly perused the note; and deciding to go, bade the coachman attend to his horses while she occupied a few minutes in assuming her out-of-door costume. They were good roadsters, those dark bays of Mr. Price, and made the distance between Prince Street and Thirty-sixth, near which the banker resided, in twenty minutes; and a trifle later the widow was seated in a tastefully-ornamented boudoir, awaiting her host, who had not yet completed her afternoon toilette. Rich laces and hangings depended from heavily-carved cornices, shrouding the windows so that the light from the broad day without lost half its brightness and freshness in the struggle to penetrate the folds of curtain and lambrequin. Dainty bits of porcelain, statuettes in bronze and bisque, and a variety of the trumpery called bric-a-brac, were arranged or scattered about the room, on table, mantel, bracket, and hearth. After a brief survey of her surroundings, Mrs. Camp picked up a copy of Keats, which lay upon an ottoman, and for a few moments scanned the warm measures of Endymion. The air of the room was hot and close; to the widow, accustomed to daily exercise in the free air, and to apartments whose temperature was kept at a moderate degree, it became oppressive and sickening, and she instinctively dropped Keats and went to a window and lowered the upper sash. At that moment Mrs. Price entered.

"Why, Alma, are you so warm? One would think that after your cold ride uptown, you would wish to go to the register."

"I did feel a little chilled when I came in, Cora, but I soon found this room too warm for comfort, so I lowered the sash. I could not breathe an atmosphere like this, day after day, and keep well. How can you, Cora?"

"Why, I actually feel chilly now. Mr. Price says I keep the house too hot for him. He brought home a thermometer once, to show me how high the mercury would rise if I were allowed to manage the furnace, but I didn't pay much attention to it. I want to feel warm. Indeed, I caught a horrible cold the day I saw you. See how inflamed my right eye is yet. Dr. Cluchley said it was occasioned by the malarious emanations in your part of the city, and I ought not to go there again."

Mrs. Camp smiled and said: "Do I look, Cora, as if I suffered from those malarious emanations? At this season of the year, Dr. Cluchley would not find any difference indicated by the most delicate chemical tests between the air of Prince Street and the air in front of your house. I haven't been troubled with anything like a cold for more than a year."

"What! It's perfectly amazing! And how do your poor, dear children stand it down there?"

"Very comfortably. Seldom or never ill in the slightest degree."

"How *do* you manage? Why Dr. Cluchley says he has so many children with croup and sore throat that he scarcely has time to eat his meals, and he attends the best families in our neighborhood. There isn't a week scarcely that he isn't called in to look at Clarence or Lena, poor things! they are so much troubled with sore throats or tongues, or something. But you must see them (Mrs. Price here rang for a servant). The day I met you in Broome Street I was in search of a nurse, my old one having left me to go home and take care of a sick brother. So she said. You can't place any dependence upon servants nowadays, anyway. I make a change about every month, of either the cook or the chambermaid, or the waiters. Oh, dear, they almost torment me to death."

The servant having now responded to her call, Mrs. Price ordered her to bring up the children. "Please, ma'am," said the girl, "Clary has been making candy on the range, and his hands and face are all daubed up."

"Then wash him and bring him and Lena up at once. That's just the way they do, Alma; they are at something all the time."

"Do you let them eat candy when they like?" inquired the widow.

"They have some every day, chiefly molasses. That won't hurt them, you know. And then they do so enjoy themselves in making it."

"I think that if you asked your physician

whether this candy-eating were healthful or not, he would emphatically prohibit it. Cora, the atmosphere itself of this house is sufficient, in my opinion, to account for your children's liability to illness and your own colds, throwing entirely aside the injury done to stomach and liver by swallowing bits of concentrated molasses daily."

"It can't be. Surely Dr. Cluchley would have advised me on these matters. He's one of the best physicians in New York, and so kind," exclaimed the lady of *ton*.

"There are many well-informed and skillful doctors," rejoined the widow quietly, "who deem it their business to deal with sickness as they find it, and not to advise with reference to its causes."

"Mercy, I can't trouble myself with causes and medical philosophies. I leave them to the doctors. I suppose you are quite a doctor yourself, Alma. You speak so scientifically. But don't practice medicine, I beg of you. I think women doctors are just horrid. Dr. Cluchley says that they are *so* superficial."

"Did you ever try one, Cora?"

"No, indeed, and I don't know any one who has, although they say Mrs. Lang, who resides up a little way on Thirty-fifth Street, employs one. She's a very intelligent and wealthy lady, so Mr. Price says. I am not acquainted with her."

"Changing the subject for the nonce, did you find a nurse to your satisfaction, Cora?"

"Oh, dear, no. Such objects as one meets with in responding to advertisements! I called at five different houses, mounted ricketty stairways to third and fourth stories. Sometimes I thought I'd never reach the apartments I was in search of. Oh, such miserable dens! and such shocking, dirty-smelling places! How *can* you live in that neighborhood, Alma? Some people seem to be made to endure anything. But excuse me, I'm not answering your question quite. I did engage one of the objects, and she came yesterday. I knew she wouldn't suit, but what could I do? I must have somebody. Don't you know of any one in whom I could place confidence? Some girl with just a little neatness and taste, and who will have a particle of regard to the duties she is hired to perform? Really, the girls I have had lately seem to care for nothing besides their wages.

MRS. CAMP IN HER OLD SCHOOLMATE'S HOUSE.

They don't appreciate you, no matter how many favors you allow them."

"Having lived a good deal among the class that supplies most of the labor in our domestic service, dear Cora, I am of opinion that its character is in the main but a reflection of the treatment accorded by the employing housekeeper. I know, personally, a

half-dozen of worthy young women now without employment who, in considerate hands, would prove efficient household assistants."

"Do you know a good nurse? I would be ever so much obliged to get one whom I could trust," cried Mrs. Price.

"I know an honest, earnest working-girl, a good seamstress, who loves children, and has a good share of practical judgment."

"I want one who can sew, of course; I wish you would send her up to me. But, Cora, if you had my experience with girls, you would think—" At this moment the two children came shyly, half sidewise into the room. "Well, come at last, my darlings. See, this is mamma's old schoolmate, Alma Seaton, now Mrs. Camp. She wants to see you, and talk with you."

"Yes, my little ones, Clary and Lena, come here to me," said the widow, with her sweet smile, which always went straight to a child's heart.

The children looked at her for a moment, then tripped over to her chair; and, one on each side, leaning confidingly against her knees, while she patted their cheeks and smoothed their hair.

"I declare, Alma, the poor things love you already. Did you ever see such a wan and bloodless creature as Lena? I have a hard time to bring her up, you may believe; sick from her very birth."

"The dear little ones," replied Mrs. Camp, half to herself, "need pure air and good, nutritious food, mainly, I think. Wouldn't you like to see my Sadie, Norton, and my little Dell, dearies?"

"Yes I 'ud," chimed in the children.

"Perhaps mamma will bring you down to see them. Sadie and Dell are home after three o'clock."

"I'd much rather have them come up here," said the fashionable lady. "Suppose I send down James for the girl you spoke of day after to-morrow, and bring up the children at the same time? To-morrow will be New Year's Day, you know."

"Thank you, Cora, for your kind interest. I shall let Betty know your wishes—and if Sadie have no engagement—did I tell you that she teaches? She sometimes has some extra duty on Saturday; they will be delighted to come up. Dell and you, my dearies, will have a fine frolic."

"Won't it be nice, mamma?" cried Clary. "We've sca'cely anybody to play with, and 'e girls they's so cross."

"Its getting late, nearly sundown, and I must be going."

"No, no, no," said Mrs. Price and the children in chorus.

"Yes, Cora, and my little dears, Sadie and Dell will almost think their mamma has run away from them. I am home, as a rule, when they return from school, and now it is half-past four."

The hall bell rang, and shortly afterward the waiter announced, "Mr. Stanley is in the parlor, ma'am."

Mrs. Camp was standing in the attitude of departure when the waiter entered, and at the mention of "Mr. Stanley," turned with a heightened color inquiringly toward her friend.

"Oh, Mr. Stanley is an acquaintance of Price's. He is a committee-man or something in the church—Dr. Phillips', where we attend. Mr. Price likes him ever so much, and will have him come up to dine with us occasionally. You and he would get on famously together, I think. Your ideas about living are somewhat alike. Will you have an introduction?"

"No, thank you, not to-day; I mean it's too late, and I *must* go. I can take a car right down."

"No, Madame Camp, you shall wait for the carriage."

CHAPTER XXVII.

AN UNEXPECTED MEETING.

BUT the parlor door was open, and Mr. Stanley, the very same Stanley to whom we have given a not inconspicuous place in the events related in previous chapters, heard the half-protesting tones of the widow, and the emphatic response of the hostess, and when the ladies appeared in the hall, he walked toward them.

"Pardon me, Mrs. Price, for interrupting your tête-à-tête, but I heard you mention the name of Camp, and as I am interested

in that name, I felt authorized to announce myself. You have given me the unexpected pleasure of meeting one whom I am proud to reckon in my list of acquaintances," continued the gentleman, as he shook hands with one and the other; "and were it not for the imperative demands of a certain little family down-town upon her attention at this hour of the day I would join Mrs. Price in urging a longer stay."

"So you are acquainted. Dear me!" said their excitable hostess. "I'd like to know how it came about. Quite an episode, really!"

The color deepened on Mrs. Camp's clear face, as she replied: "Mr. Stanley can tell you how it occurred; and it is not so wonderful, for Mr. Stanley has been engaged in some good work in our quarter, and is interested in the Mission where the children and I have attended on Sundays for a long time, and where Sadie now teaches; and then —"

"Let me interrupt, please," said the gentleman. "What does it matter how we became acquainted? That we know each other; that Mrs. Camp permits me to stand in the relation of an acquaintance—of a friend," added he, with a glance of entreaty toward the widow, who instinctively responded to it: "Yes, a friend indeed"—"is enough for me."

"Quite romantic, I must say," exclaimed Mrs. Price, whose fondness for peering into whatever seemed mysterious in the affairs of her friends, was one of her besetting sins. "Alma, you *must* tell me all about this. I don't expect to get much from this staid bachelor. He has a most exasperating way of treating one's curiosity, and Price usually joins him in what he calls 'heading me off' when I want to gossip a little about doings in society. But some gentlemen I know are just as fond of gossipping over their wine as we poor women are over our Young Hyson."

"Yes, in that I agree with you, Mrs. Price," said Stanley; "they lose their heads in their wine-cups, just as the ladies do in their tea-cups. But there's the carriage; I presume that it is waiting for our friend here. Mrs. Camp, it would give me great pleasure to accompany you, but these good people—"

"Thank you, thank you, indeed. I shall go very well alone. Good-evening, Cora, I shall not forget the nurse," said Mrs. Camp, somewhat hastily, and walking toward the hall-door, which Stanley had opened. As she passed out, the gentleman accompanied her, and thinking her manner toward him might have been considered abrupt, she remarked in a low tone, and with blushing cheek, "I certainly appreciate your kindness, sir. I hope that you did not think me rude?"

"Rude! My dear madam, it is not in your nature," he replied earnestly, adding as he assisted her to enter the vehicle and closed the door: "Believe me, I am deeply grateful for your consideration. I am proud to be so kindly regarded by you."

"I would like to know what you two were talking about down there," said Mrs. Price, when Stanley joined that lady in the parlor.

"'Tis a great mystery," replied he quizzically.

In the course of the dinner that evening, Stanley evinced so much vivacity and light hearted cheeriness that Mrs. Price affected to think him excited by champagne, and bantered him for inconsistency to his high temperance principles. Stanley, however, playfully responded to her sallies, and now and then stimulated her curiosity to a higher pitch with the remark: "'Tis a great mystery."

When the widow reached the door of her humble apartments, three pairs of arms and hands hastily and closely enfolded her, and a common exclamation of "Where have you been so late, mother?" revealed how anxiously those children had waited for her coming, and how deep was their affection. The wave of sweet emotion which thrilled her heart made her forget poverty, surroundings, and the impressions which her old schoolmate's affluence had so recently made upon her sensitive, esthetic consciousness.

"My darlings," said the happy mother, as they drew her into the room and led her to

a chair placed near the fire, and with many caresses assisted in the removal of her bonnet, shawl, and gloves, "I have been up to see Mrs. Price. Mother told you about her yesterday, you know."

"Yes, mother mine," said Norton; "Mickey told me that you'd gone away in a fine carriage, the same that he'd seen here day before yesterday; but when five o'clock came, and no mother, Sadie and Dell began to think you were lost."

"We t'ought mamma was run'd away with, and then it was so dark and sister Say was a'most 'stracted," cried Dell.

Mrs. Camp clasped the little one to her breast and kissed her still anxious face.

"Mother should not have stayed so long, my own dearies, and she did not intend to do so, but one thing and another detained her until it was so late, and then it is so far to Mrs. Price's. But let us have some supper. My Sadie, I see, has prepared everything. How nicely the table looks! And such tempting charlotte russe! Where did you get them?"

"A boy brought them here, mother, about two hours ago. See, here are some more, too, and some beautiful oranges;" Sadie opened the pantry door; "all packed so nicely in the basket. I only took four from the top. The boy said he was to leave basket and all. Here's the card that was pinned on the napkin. See, your name on one side, and on the other, 'Please accept with a New Year's greeting from a friend.'"

"A New Year's present. Some one thinks of us very kindly, and wants us to have a taste of a delicate bit of cookery once in a while. I was very fond of charlotte russe when a girl, and after we were married your dear papa and I often went to a restaurant in Boston, while we lived there, and had some with fruit in lieu of tea; but come, my children, you must be very hungry. I know Nortie is, for he's been biting his thumb the last three minutes. Let's have supper, and I'll tell you about my visit at Mrs. Price's."

Very pleasantly that evening, or what was left of it, sped with the Camps, and the neighboring church clock tolled ten ere they were all snugly ensconced in bed.

CHAPTER XXVIII.

WHAT A HOLIDAY BROUGHT.

CHEERY "Happy New Years" were exchanged the next morning between mother and children, long before the car of Phœbus lighted up the east. Holidays are prized by the poor, as all know, and are observed in the homes of penury with even a keener zest than by the well-to-do. So, in that tenement on Prince Street every one was astir early, and there were loud and hearty greetings and merry expressions of good-will passing to and fro, as neighbor met neighbor in the narrow halls. In the different apartments a warm glow of affection lit up haggard faces as simple, cheap gifts or good wishes were exchanged between father, mother, sister, brother. The money value of the gifts had little consideration with most of those poor folks. They were received and prized as so many representatives of affectionate regard and sympathy, as something above mercenary calculation, and thus they contributed a pure and profitable element of enjoyment to the holiday which brought, by its associations and renewal of hopes so often disappointed, a fresh gleam of sunshine to those poor, weary laborers and sufferers.

Breakfast passed off merrily with the Camp family. Norton and Sadie had the holiday for their own devices, and they discussed sundry plans for its use. Mrs. Camp was no blue Puritan, and far from prescribing "rules and regulations" for the enjoyment of her children. When an opportunity came, like a holiday, she allowed Sadie and Norton to choose for themselves how they would employ the hours, trusting to their native judgment and training to guide them in the matter of propriety. Recreation, intervals of relief from the grave, vocations of life, she knew were essential to health of mind and body in every stage of life, and were specially necessary in youth to preserve the elastic balance of the temperaments.

Norton said that he "guessed" he would go over to Larry's and give him a lesson in the morning, and then go up to the park and see the skating. Larry and he would have a good time sliding on the ice, if they

couldn't skate. Sadie said that she had a nice book which she wanted to look over; then she'd do a little sewing, and then, if there were time before dinner, she would go and call on Betty, and the family of one of her scholars who had not been to school that week on account of illness.

"What is Dell going to do?" asked mamma, after the older children had indicated their intentions for the morning.

"I dess I'll read the little book with the pretty pictures Mr. Hammond gave me for my Christmas. Oh, mamma! 'spose I go up-stairs and bring down little Mickey, and show him the pictures, and tell him some of the nice stories about them?"

"Yes, my darling, you may, if you wish."

"And mamma, may I — may I give him one of those lovely cookies in the basket?"

"Why, yes; the poor little fellow will so enjoy it. That reminds me, Norton, that if it will not take too much of your time, I would like you to go down to that dear, sick girl, Miss Lind, and ask how she feels to-day."

"I can stop there on our way to the Park, mother. It will be only a few blocks farther."

"Some of those charlotte russe would, no doubt, please her weak, broken appetite. Can you spare two or three of them, children?"

"Why, mother," replied the generous Norton; "a whole dozen was sent to us. I guess we can spare three or four easy enough." Going to the pantry he took down the basket and brought it to Mrs. Camp, who removed the napkin.

"See there, mamma," cried Dell, who was gazing wistfully at the tempting display; "Some of the oranges have little pieces of paper on 'em."

"So they have," exclaimed Sadie, who had drawn near too. "I wonder what it means."

"We shall soon know," replied their mother, who selected three of the cakes and packed them in Sadie's lunch-basket, with two of the oranges, and then took out the specimens of golden fruit which had the slips of paper. "There are four of them marked, you see, children. One for each of us."

"There's your name, Dell, and there's mother's, and mine, and Sadie's. I wonder what it means?" cried Norton.

"P'r'aps we was to have only four, Nortie, and to give t'others away," said Dell.

"Oh, it must mean something else, Dell Don't you think so, mother?"

"Well, we'll know at dinner. We'll have them for our dessert. Won't we, mother?"

"Yes, Nortie. Let's try to keep our curiosity in check till then. Now you can go to Larry's as soon as you like, and take the basket for Miss Lind so that you will not have to return here for it."

Half-past twelve found the Camps assembled at their frugal dinner. Norton had witnessed several amusing incidents on the skating ground, and related them graphically. Sadie had some neighborhood gossip to tell, which she had picked up while out, and Mrs. Camp contributed a good share toward the family entertainment by telling of the calls she had received in the course of the morning, from three or four of her co-tenants who wished to exhibit in a particular manner, by the aid of their tongues, their esteem for the widow. The time was thus consumed quite hilariously. When the oranges were distributed according to the named slips, the young folks were in a high state of excitement, and interchanged many exclamations of wonder and expectation, and yet they knew not why.

"There's something in the bottom of mine," cried Norton; and breaking apart hastily the thick rind, he drew out a folded paper.

"It's heavy. A five-dollar gold piece, mother! and here's some writing: 'Will my young friend accept this? He wants a drawing book and some instruments, I know.' Isn't it glorious? I can get them now."

Dell had seen her brother draw forth his prize, and with gleaming eyes and almost breathless, tore asunder the already loosened peel of her orange. "I've got one too," cried she; and running to her mamma, placed on the table before her a small white packet.

"Open it, my darling, yourself." The child did so, but something escaped her anxious fingers and fell to the floor. Sadie exclaimed:

"It's a ring. A ring!"

"Oh, how pretty! how pretty!" shouted the delighted Dell, picking up the golden circlet; "and see what a bright little blue stone, mamma. Oh, may I wear it?"

"Yes, my darling, mamma thinks that you may."

"Sadie, have you got to the bottom of yours yet?" asked Norton, who was admiring the bright coin he had just found.

"There's something nicely set in mine, mother dear, and I am almost afraid to take it out."

"Oh, hurry, do, and let's know what it is. Here, I'll help to dispatch that big fellow if you're so afraid;" and the eager boy reached over toward his elder sister's plate.

"No, I'll show you. It might be something delicate," said the girl, as she displayed a small packet of about the size of a silver dollar, and with trembling fingers unfolded it.

A small, neat watch attached to a bit of blue ribbon revealed itself. Sadie burst into tears; and, running to her mother, laid the watch in her hand. "Oh, I can't take it; I can't take it," she sobbed.

"Why not?" asked Norton, in some embarrassment, because of Sadie's unexpected tears. "I guess we can soon tell who sent us these things. Can't we, mother?"

"We may be able to learn, Norton. Sadie feels that she can not accept so valuable a gift without knowing that it would be entirely proper."

"Seems to me very funny that sister Say cries over such a bootiful watch."

"And, mamma," continued Dell, "nobody but Mr. Stanley would give us such nice things, I know. What does the paper say, sister?"

Sadie picked up the wrapper of the watch and read with brimming eyes: "The good teacher values the flying minutes, and to her a convenient time-piece is a real necessity. Will my young friend accept this, 'doubting nothing?'"

"No one," the girl added, choking down a sob, "would do such things in so delicate a way but Mr. Stanley."

"Isn't it splendid?" said Norton. "Some men who could afford to give fine presents would have sent a long fancy thing of a chain, but he understands his business; didn't want Sadie swinging through Spring and Sullivan Streets every day with a great chain glistenin' and danglin' from her neck. But, mother, you haven't looked into your orange yet. Dell, what ails mother, she's so quiet?"

"I 'spect she's overcome; 'nough to make her, isn't it? Do, mamma, look into yours. There must be somethin' nice, too, for you," said Dell, leaning on the table by the widow.

"Well, my sweet," replied Mrs. Camp; "see what you can find." Dell divested the pulpy mass of its covering (some deft hand had skillfully prepared beneath the skin of each orange a little chamber in which was placed the gift) and held up a closely-folded paper.

"Looks like a letter, mamma." Mrs. Camp took it from the child, and as she held it between her thumb and forefinger hesitatingly, she felt a hard, rounded substance within. Slowly she detached the folded edge, for it was gummed fast. Once opened, several closely-written leaves met her eye, then a heavy, plain, gold ring. Something, a device, on the inner surface of that ring, transfixed her attention, and caused her to turn very pale, and almost gasp for breath. Rising with her hand pressed tightly upon her heart, she walked hastily to the inner room and shut herself therein.

The children being left thus abruptly by their mamma, looked at one another in bewilderment. Dell was inclined to cry, but Norton checked her by saying, "Hush, Dell. It can't be anything very bad. Whoever sent us these nice things wouldn't be so wicked as to hurt mother. Sadie, can't you guess?"

"I saw a ring in the letter, Nortie, and it was that, I'm sure, made mamma look so."

"Mamma will tell us 'bout it 'fore long. I wouldn't love Mr. Stanley any more if he hurt mamma, and I wouldn't wear this ring 'though it's so pretty," said Dell.

"Mr. Stanley'd never hurt anybody," replied Norton in a peremptory tone.

"Don't speak so loudly, Norton," entreated Sadie; "mother might be sick."

"That's so. Let's be still and wait until

mother calls or comes out." And the children, suiting the action to the word, sat quietly for full ten minutes, when their mother re-entered the room. Her features wore the marks of recent agitation, but she smiled upon the little group that gazed at her with so deep an expression of relief as she resumed her chair; and, holding up her left hand, on which gleamed a ring they had never seen there before, she remarked:

"See, my own darlings. It was once your dear papa's."

H. S. D.

(To be continued.)

MARIANNE S. WETMORE.

THIS lady has a large head as compared with her size and weight, and it absorbs her vitality rapidly, and works it off by way of thought, feeling, and sympathy. She has an element of toughness, but lacks vital power. She has a great deal of endurance without having a great amount of strength. If she were larger and more highly endowed with the vital temperament, she would have a broader, plumper face, and could sustain her brain in its arduous labors much better. She should associate with people who are strong, plump, healthy, vigorous—so as to borrow something of their surplus vitality and vigor. Her brain is large at the top and becomes narrower at the base, showing that the superior developments have the ascendency.

The upper part of the forehead is massive, indicating the tendency to think and reason, rather than to gather. She is affected more by causes, by the interior philosophy of subjects, than by external forms and facts; and she is influenced strongly by motives and emotions, by themes and theories.

She has good power of observation, and acquires knowledge by travel and by daily life and experience; and is, in fact, a practical woman; but the theoretical, the planning, the forelooking elements lead in her mental processes.

She has large Constructiveness, and is a wonderful hand to devise ways and means. She has pretty good Acquisitiveness, but it is not so much developed in the direction of saving as it is in planning how acquisitions can be made. Her thought would instantly go out to see how additional income could be created, rather than how a meager income could be made to eke out the absolute wants of a family.

She has strong moral development. The head rises high from the opening of the ear, and from the eye upward, and broadens as it rises. She has large Benevolence, which renders her kind-hearted, sympathetical, willing to sacrifice for others, and anxious to do them practical service; to help them to help themselves. It would be more like her to hunt up a place for a poor boy or girl to learn a trade and earn something while laying the foundation for future independence, than to make gifts to help them along for to-day. She has strong Faith, an unusual development of that sense of the spiritual, the immortal, and the invisible—which gives her a strong sense of ultimate results. She has faith to believe that she shall reap in due season if she faint not. She has faith to cast her bread upon the waters. feeling certain that she or somebody will find it after many days. To her the future and the possible are as real and certain as things seen and present. She has Veneration well developed, which gives a religious cast to her thought and feeling. She is not so much inclined to think that Providence will fill the empty dish if it be kept right side up, as she is to expect to fill it by means of some legitimate industry that shall earn success. She plans in hope, cultivates in patience and care, and expects the harvest according to the tillage.

She has strong Imagination, and is able to inspire others with her own spirit. She has Language enough to write or speak well, to clothe her thought in befitting expression; and she has enough of Ideality and Imagination to make her poetical and artistical.

She appreciates wit and humor; enjoys the mirthful side of things; has conscience enough to believe in truth and duty, and ambition to rank well, and the desire to be appreciated and approved. She loves justice for its own sake; is cautious, watchful, regarding her own safety and the safety and welfare of others with great care.

Her large and active brain—inspired by moral, spiritual, and sympathetic feeling—arouses her energy and effort so that she is constantly inclined to overdo, and will wear out her life in intense thought and effort without taking enough to nourish the system, to recuperate and rest. She is too much inclined to be always on the wing, and keeps her system taxed to its utmost with brain-labor. If she want to last as long as possible she should sleep more, and have occasions when she can unbend the bow and thoroughly rest and recuperate.

MARIANNE S. WETMORE, of Charlestown, Mass., was born in Kingston, Mass., November 2, 1832. Her father's name is Alden Sampson, who has been for years in

the service of the United States in the Navy Yard at Charlestown, Mass. She is a direct descendant from John Alden, who was among those English Puritans who came over in the *Mayflower*.

In a letter written some time since to a friend, Mr. J. C. Taylor, she says: "Educated by a father and mother who were *always* doing for those more needy than themselves, and inheriting a desire or a nature which impelled me on in whatever work for the moment came before me, and the call for work coming constantly in the form of distressed humanity crying for help—what could I do but take hold of the work for which by nature I was organized?" In another place in the same letter, she says, "I think I was intended for a *helper*."

Not constitutionally strong, she has suffered more or less from ill-health since her eighteenth year, yet has always exhibited an uncomplaining spirit. Her earnest, self-sacrificing disposition has rendered her, as it were, inattentive or unobservant of her own bodily weaknesses and pains.

Some ten years ago she began the special work of caring for friendless prisoners, and from that time to the present she has been constantly engaged in it. Whenever she hears of a prisoner without friends, she opens a correspondence with him, and by cheering words and other marks of sympathy and friendship, endeavors to encourage him to look forward to a brighter, better future. She keeps up the correspondence throughout the term of his imprisonment, and at its close takes immediate steps toward co-operating with him in his attempt to retrieve his character and life.

She does the right thing at the right time. She clothes and feeds him and secures him honest employment. She has taken ragged and forlorn prisoners just discharged, into her own home and kept them for weeks together till employment and means of self-support could be found.

Has this labor and interest been compensated by good results? Yes. With but a few exceptions, her assistance has been appreciated and her advice followed to the great betterment of the moral and social condition of her beneficiaries.

References could be made to several who received her kind and affectionate help in the manner above described, and who are now, and have constantly been, following in the path of right and duty which she marked out for them. It would be a gratification to us to know how many she has thus assisted, but it is doubtful if she herself could tell.

MY HOME KINDERGARTEN.

No. III.

A YOUNG person finds pleasure in learning that there are three primary colors—blue, yellow, and red—that all others are combinations of these; that some colors harmonize, some contrast, others produce discords. This bit of knowledge thoroughly understood would decorate our homes in agreeable colors, make carpets and curtains and paper-hangings harmonize or pleasingly contrast with each other and the furniture, and dress our daughters and daughters' daughters in good taste; they would not wear blue dresses with a green bonnet and red shawl, or two or three different shades of the same color together.

Several selections from different writers upon the subject of color in dress Dora read and studied until she knew them thoroughly. One from Mr. Alison's writings I will insert here, as it is so plain and excellent. He says: "No dress is beautiful in which there is not some leading or predominant color, and that color must have some pleasing or affecting expression. There are colors which have no character in themselves, and are chosen for common apparel because they are convenient for the peculiar occupation or amusements in which we are engaged. Such dress has no beauty. When we say it is a useful color, we give it all the approbation to which it is entitled.

There are, on the contrary, a variety of colors which are expressive from peculiar association; which are either gay or delicate, or rich, or grave, or melancholy. Such colors are chosen for what is properly called dress. When we speak of such dress, we generally describe its beauty by its character; as delicate, rich, gay, or magnificent. There would be an equal impropriety in choosing the color of ornamental dress for its convenience, as in choosing ordinary apparel because it was gay or splendid.

"No dress is beautiful in which the composition of the inferior colors is not adapted to the peculiar expression of the prevailing color. The accumulation of different colors without regard to the general tint of the dress is expressive of ignorance or vulgarity. On the other hand, to suit these colors to the prevailing color is considered as the great criterion of taste." Then, to illustrate the author's meaning, I took different colored bits of cloth or paper or threads of Berlin wools, and, placing some solid color as the foundation, with the wools I made plaids or stripes upon it, or cut out cloth-flowers of some other color, and thus taught my daughter how ugly fabrics or beautiful ones might be made by the improper or correct combination of shades.

Many people think beauty of color lower in its nature than beauty in form; but if they would study nature, and see how much the blue of the sky, the green of vegetation, the varied tints of the rainbow add to our pleasure in the contemplation of a landscape—if, in the words of Ruskin, "such disparagers of color would only take the pains to imagine what the world and their own existence would become if the blue were taken from the sky and the gold from the sunshine, the verdure from the leaves and the crimson from the blood which is the life of man, the flush from the cheek, the darkness from the eye, the radiance from the hair—if they could see but for one instant white human creatures living in a white world, they would soon see what they owe to color."

By mixing paints of the three primary colors, Dora learned that of the secondary colors orange was a combination of red and yellow; green, of blue and yellow purple, of red and blue; and that each of these secondary colors contrasted with the primary color which did not enter into its composition and harmonized with those which formed it. This rule is invariable, except with blues, which do not seem to harmonize perfectly with all greens; though a blue-green harmonizes probably with blue and a yellow-green with yellow.

The tertiary colors are formed from the secondaries, and are also three in number. Citron comes from orange and green, russet from orange and purple, and olive from green and purple. The tertiaries relate to the secondaries as the secondaries to the primaries. Thus, citron contrasts with purple and harmonizes with orange and green; russet contrasts with green and harmonizes with orange and purple; olive contrasts with orange and harmonizes with purple and green. Maroons, drabs, browns, etc., are combinations of the tertiaries.

As will be imagined, Dora did not master these subtleties of harmony and contrast for many years, but the leading colors and combinations any child of eight years will readily acquire; and persons who have not "much eye" for color, can, by study, learn sufficient of the theory of combinations to avoid the gross errors daily committed. The primary object of dress is to cover and protect the body; the secondary, to embellish and adorn it. "Becoming dress depends upon its fitness to the wearer, and the agreement of its predominant color with the wearer's complexion and with its own hues." No one style of dress becomes all; there is such diversity of form and complexion. The dress proper for a young person is not suitable for one advanced in life. The dress which adorns a tall, graceful figure, may look ugly upon a short, stout person; it does not suit two different forms. The same remark applies to the material of dress. A slight, graceful girl often looks perfectly beautiful in soft, flowing muslin; when if dressed in heavy, rustling silk, laden with ornaments, she would be a little fright.

Richness and harmony of dress almost take the place of beauty of face and per-

son. A plain woman dressed gracefully will be more admired than a pretty woman carelessly dressed. Cheap ornaments of every kind were forbidden to Dora. One handsome ring was chosen, rather than three fingers full of common ones. We disliked sham in everything — ornaments not excepted. The wearing of trashy finery debases fine taste and blunts the moral sense by substituting seeming for reality. Better the tiniest edge of linen lace, or a simple ruffle, than imitations of Honiton or Valenciennes.

Dora was dressed as children should ever be—simply. The tendency of the present day is to over-dress young girls. The money thus employed would be much better expended in good books and pictures for them. Our young people are learning to value elegance of dress unduly, and when grown, will find nothing new and fresh. Having always had laces, embroideries, and silks, only by paying enormous sums can they purchase "a new sensation."

While there are so many poor and suffering in the world, children should be trained to enjoy good and beautiful clothing without longing for the elegant and expensive. We fancy ourselves kind-hearted and sympathetic, when, sitting in our own pleasant homes beside a cheerful fire, we say: "I am sorry for any who are without food and warmth to-night;" but will we go to-morrow, seek out the destitute, and give up that beautiful pin or costly silk that we desire, but do not need, in order to help those who can not help themselves? "Alas! for the rarity of Christian charity under the sun." As a nation we give freely to charities upon a magnificent scale, but we need yet to cultivate that charity which gives the "cup of cold water" only that brings no praise.

Though I taught Dora much about tasteful dress, it must not be imagined it was made a special study, or that great stress was laid upon the matter. I taught this in those odd moments which are at the option of all to improve or waste, and many years passed before they were thoroughly mastered.

Dora early learned habits of accurately observing surrounding objects and persons. In her lessons upon color she noted the hues of the clouds, the sky, the sunset, vegetation, birds, and flowers. When learning to draw, her attention was directed to the shapes and sizes of objects, the branching of trees and shrubs, the oval of the leaves, the cup-shape of many flowers, and the varying animal forms. She learned to know the plants, flowers, and trees by name and sight at an early age.

A foot-rule marked with inches, a yard-measure, a small scale for weighing, and tin pint, quart, and peck measures were given her with her slate and pencil for arithmetical studies; and she counted, weighed, and measured day after day and week after week until she had acquired real, practical, live knowledge of "denominate numbers."

A great part of the drudgery of learning the botanical nomenclature was saved by daily observation and naming the peculiarities and parts of plants. The elements of geology were acquired in the same way. Handling over and learning the names of specimens and fossils fixed in the youthful mind the appearance and the name of the great rock families. This rudimentary knowledge, gained while the memory was plastic and retentive, saved at least one-third the labor of acquiring these sciences subsequently.

I taught Dora when but a child the quality and value of all articles of dress, household furniture, food, pictures, and books. Teaching her to distinguish cotton, linen, and silk goods; fine, medium, and coarse qualities in carpets, dress-materials, toweling, etc.; the different woods of which furniture is made, the quality of workmanship and finish, the strength or weakness, durability or fragility; the varieties of porcelain and glass; the difference between stale and fresh vegetables and fruits; the marks of excellence in paintings, engravings, and the binding, printing, and illustrations of books.

This knowledge saved her many mortifications that sensitive ignorance meets; and when making purchases, she could always use her means to the best advantage and was not liable to be defrauded. Many a

young woman is married and sets out to keep a house and make a home without having ever received an hour's instruction upon these points. Some few persons "pick up" such knowledge without any effort, but most young girls occupied with their books do not acquire it without much loss and annoyance after leaving the home of their gay, thoughtless youth.

AMELIA V. PETIT.

"GIVE, AND IT SHALL BE GIVEN TO YOU."

ARE we votaries of pleasure?
Do we kneel at Mammon's shrine,
Pouring forth the soul's rich treasure,
Precious gift of the Divine?

Do we aid the fallen creature
In her downward path of sin
To regain the priceless feature—
Heeding thus the voice within?

Breathe we comfort to the weary,
Oft, in anguish, sore oppprest;
Lighting up their pathway, dreary,
To a home of blissful rest?

Fill the cup, aye, to o'erflowing;
Heap with joy, nor deem it vain:
As we measure in our sowing,
God will mete to us again.

GRACE GARLAND.

"JACKKNIFE CORNER."

OF course the name is a fictitious one; but it is not a misnomer; for go there at any time you will, and you will see groups of men and boys whose only occupation seems to be whittling. Were the jackknives used to construct some useful article we would not complain, but instead they are used only to while away the time and make litter.

We have known young men and boys, endowed naturally with a fair amount of intellect, waste as much time in one year as would, if properly employed, familiarize them with almost any branch of common school study, and yet ask them some simple question in American history and they are unable to answer it. And to add to this, loss of time; while hands are busy wielding the jackknife, tongues are active in repeating coarse jokes and obscene stories. The air also is impregnated with smoke from a dozen filthy clay pipes, and the platform of the one store of which "Jackknife Corner" boasts, is scarcely discernible through its coating of tobacco juice.

Sometimes the crowd adjourns to the street in front of the blacksmith-shop, and amuse themselves by throwing horse-shoes from one stake to another, meantime interlarding their conversation with oaths and choice by-words. But such tame amusements do not long satisfy. They return to the store and spend the evening in drinking and gambling; for, though "Jackknife Corner" is in Maine, and consequently under prohibitory law, the merchant has so little of manhood in his nature that he smuggles rum from the adjacent Province of New Brunswick and sells it, in secret, to those who frequent his store. From drunkenness to licentiousness is but a step; and thus our friends of "Jackknife Corner" tread the downward way.

Reader, this is no fancy-sketch; the place and persons that we have attempted to describe have a real existence, and we fear that even in enlightened New England "Jackknife Corner" has its counterparts. That there is a cause for this degradation is apparent to all; and, though there are three churches and several schools in the town, we pronounce the cause to be ignorance.

Surely, were the young men of "Jackknife Corner" aware of the misery which they are bringing upon themselves they would not thus subvert the higher faculties of their minds—surely, if they knew that they can not be happy thus for a single day, they would abjure forever those indulgencies which ruin both body and soul.

But there is a remedy for, as well as a cause of, this evil, and that remedy is Education, and no part of education is more impor-

tant than a knowledge of ourselves. Thus we see the great changes for the better which Phrenology would make if applied to the condition of such persons as are described above. By giving them a knowledge of themselves, and of the laws which govern them, it would lead them to choose the better way. And we do not despair that Phrenology will yet be applied to the condition of such as these. We hope and believe that as the tide of progress rolls onward, the good effect which our science has upon the morals of mankind will be felt even at "Jackknife Corner." JAMES PERRIGO.

Literature, Mental Science, and Education.
True philosophy is a revelation of the Divine will manifested in creation; it harmonizes with all truth, and can not with impunity be neglected.

PHYSICAL ELONGATION; OR, SCIENCE vs. SPIRITUALISM.

"THE signs of those that are inspired are multiform; for the inspiration is indicated by the motions of the whole body and of certain parts of it, by the perfect rest of the body, by harmonious orders and dances, and by elegant sounds or the contraries of these. *Either the body likewise is seen to be elongated, or increased in bulk*, or to be borne along sublimely in the air, or the contraries of these are seen to take place about it."—Iamblichus, *De Mysteriis*, Taylor's Translation, page 124.

Among the various manifestations of the supernatural, none seem more incredible than physical expansion and the lengthening and shortening of a human body. Standing face to face with the miracle of elongation, we find our credulity stretched to its utmost tension, faith in the genuineness of the phenomena gradually diminishes, and the mind wanders from phase to phase of this ever-recurring mystery, only to suffer a general collapse with the historic witches whose "bodies were now blown up like a barrel without bursting, then again were drawn in as if they were totally gone, and as suddenly again puffed up like a pair of bellows, and with the loudest noises, as if struck, moved up and down, sunk and swelled again," and we sink into a sense of our own littleness, or come at last to doubt the evidence of the senses, denying the validity of all human testimony, rejecting the facts which can not be explained, or indolently assigning them to the domain of the supernatural.

"I should have to see it done, madam, before I could believe," said a leading scientist to the writer. "Well, Professor T——, you may reject the historic witches and the Egyptian mediums, but you can not ignore the bewitching young ladies of modern society, with their electrified arms puffed to order like their party-dresses. Take this one fact, that, in New Haven to-day, a magnetic physician can temporarily increase the bulk of the human arm by simply passing through it an electric current. Then step from these artificial charms of modern drawing-rooms to the laboratory of the scientist, where the influence of electricity in expanding solid bodies was discovered by Dr. Priestly during his experiments on the effects of explosion through metallic substances, when he found that a chain was actually shortened after the charge of a battery was passed through it. A length of chain of exactly twenty-eight inches, after having transmitted a charge of sixty-four square feet of coated glass, was shortened one-fourth of an inch, or 1-112 part of its length. Mr. Brooks also succeeded in shortening a wire one inch and a half or one-eighth of its whole length."

"Madam, I can not accept any of these facts. I should wish to see Dr. Priestly perform those experiments."

"Oh, I am not pinning my faith upon any one experimenter. There is your personal friend, Prof. John Tyndall, speaking of the law of angular reflection, incidently refers to this subject, giving the weight of his illustrious name to the support of facts which some experimenters still seek to deny. In his recent lecture on 'Light,' he says: 'Thus, by attaching mirrors to his suspended magnets, the celebrated Gauss was able to detect the slightest thrill of variation on the part of the earth's magnetic force. The minute elongation of a bar of metal by the mere warmth of the hand may be so magnified by this method as to cause the index beam to move from the ceiling to the floor. The elongation of a bar of iron when it is magnetized may be thus demonstrated.' In another place he adds: 'A strip of glass six feet long, two inches wide, and a quarter of an inch thick is held at the center between my thumb and finger. I sweep over one of its halves a wet woolen rag; you hear an acute sound due to the vibration of the glass. What is the condition of the glass while the sound is heard? This: its two halves lengthen and shorten in quick succession.'"

Professor T——'s attitude toward this phenomenon is such a type of the present prejudice against every phase of the so-called supernatural that I have reported the conversation in detail. Large-wigged science sits staring at this sphynx of material fact; denies the authenticity of historic annals, rejects the validity of all human testimony, and now seeks to ignore the inductive theories and experimental proofs of animal magnetism. It seems to me we have only to carry Prof. Tyndall's elongated bar of magnetized iron into the parlor of Mrs. S. C. Hall to find a plausible explanation of this seeming miracle exhibited in the person of Mr. Home.

During a séance at Mrs. S. C. Hall's, after the usual phenomena of raps, etc., "Mr. Home then rose from his chair—impelled, he said, to do so—and walked to and fro. Then followed the extraordinary manifestation of the lengthening and shortening of the medium's body—a phenomenon not unknown to those who have followed this inquiry, but nevertheless very remarkable and equally unaccountable. Mr. Home said he felt as if his hair was being pulled, but without causing pain; on the contrary, he described the sensation as pleasant. At his request I placed my feet on his up to the instep, to be satisfied that he did not stand upon his toes, and at the same time placed my right hand on his body horizontally—partly on his waistcoat and partly on his trousers. The upper part of his body then rose to such an extent that my hand was in a few moments resting on his shirt, with, I should say, about an inch of space between it and the trousers below, and a similar space between it and the vest above. After remaining for a few moments at the stature of at least seven feet, Mr. Home sank quietly down to his normal size, and then appeared to be pressed down till less than five feet in height."

If we suppose the medium's person in the condition of the magnetized metal, the lengthening and shortening would naturally follow in obedience to the same principle. If the phenomena occur but seldom, on exceptional occasions, in the human body, the exception can be accounted for by the experiments of Mr. Joule, who proves that "at *a certain tension* there is no alteration in length."

We understand "Some important discoveries in magnetism have been made of late years, and some knowledge has been gained as to the molecular changes produced by the magnetic condition. Mr. Joule has shown that a bar of iron in being magnetized increased in length, while its breadth diminished. The greatest elongation observed by him amounted to the one hundred and eighty-thousandth of the length of the bar. He also states that the elongation is proportional to the square of the developed magnetic intensity. He also found that iron wires of a certain tension diminish in length instead of increasing, and that at a certain tension there is no alteration in length."—Knight's "Encyclopedia of Arts and Sciences; Art on Magnetism."

If our theory be true that the principles of animal magnetism explain the whole class of phenomena included in the term Spiritualism, we shall find no ramification of the subject too minute to be susceptible of experimental proof and inductive analysis; while a comparison of the analogous facts of mesmerism, spiritualism, and terrestrial magnetism will demonstrate a reality of vital truth in a seeming superstition and result in a future science of the supernatural.

JULIA M. HOLMES.

PHRENOLOGISTS COMPARED WITH OTHERS AS EDUCATORS.

THOSE who teach Phrenology—practical phrenologists in particular—ought to be encouraged in their efforts to enlighten the people on the subject of education, and the proper means for bringing educational influences to bear upon different classes of human developments. All can not be successfully educated by one fixed method, any more than all horses of every degree of strength and speed can be reduced to the same mode of working. Farmers and others who use horses, can generally understand at a glance by the build and constitution of a horse whether he can trot rapidly with a light load, or whether he will be able to move moderately with a heavy load; whether he is better fitted for the light carriage or for the plow; and some men are so used to this that it has ceased to be noticed as anything remarkable. But when a practical phrenologist proposes to describe a half-dozen boys, and tell which will succeed best in languages or history or mathematics or philosophy; which will be best in mechanism, which in trade, people seem astonished, and are inclined to call him a pretender or a fortune-teller.

Aside from that furnished by Phrenology there is no rule for teaching which seems to satisfy the public. Nearly every paper or book of any consequence has leading articles designed to help in developing and perfecting human character. Attempts are made to analyze it and point out the elements necessary to success in life. If this fact proves anything, it proves that there is a public demand for such instruction, and, of course, a need of it. But no two persons seem to be agreed as to how this shall be conducted. Almost every teacher, in seeking for a better way to improve his pupils, seems to be a law to himself. He has a way of working which is unlike that of other teachers, because any general method with which he is acquainted doesn't seem adapted to secure success, under his administration. He can urge, however, in support of his measures, only isolated facts. One writer gives us a story of a willful and stubborn boy, what he did, or refused to do, and how he was at last conquered, or how, being unclaimed and unsubdued, he came to grief; and that is given as a story for boys, ignoring the fact that some boys are mere weather-vanes, like clay or putty in the hands of their associates. Perhaps in the same book, or paper, a little further on, *energy* will be stated as the one thing needful to encourage young men to effort. A few names of men that have succeeded, and who attribute their success to energy, will be given as a proof that that is what *they* should have. Another says it is *self-reliance* that is wanting, and names are cited from Dr. Johnson to Benjamin Franklin, from Cromwell to Napoleon, from Chatham to Clay; the writer seeming to forget that perhaps half of the young men who may read it, will make fools of themselves by disdaining to aim at anything less than attainments which have distinguished genius. With others, again, it is *education* that is needed; and by education is meant the storing in the memory that which is taught in our school text-books, the speculators seeming not to know that a great many children go into the schools incapable of much scholarly attainment, and that others who are precocious and strongly inclined to mental activity, study till their heads consume their bodies. Other teachers, again, try to teach by *rule*. A recent Encyclopedia gives as many as sixteen rules

to be observed if one would succeed in life, thus laying down one rule or standard for the observance of all, which is like trying to get one size of shoes to suit all men.

Do not such ideas of teaching and culture show a lamentable want among people at large of a knowledge of human nature? And all these differences go far to prove what phrenologists have over and over said, that if Phrenology is not a correct system of mental philosophy, the world is without one. The error of teachers and of others who would control human nature, lies not in their rules or precepts or motives, but in trying to apply general rules to special cases, and in failing to take into account the nature of the pupil, which certainly is a very important factor in all culture.

The difference between phrenologists and others is this: Phrenologists say, "Know thyself, and make that knowledge the basis of your future conduct," and they offer a rule by which one can study others and know, before experience reveals the character, what may be expected from each one. The other method is to say that what others have done, you can do, provided you do as they did.

Dr. Adam Clarke slept four hours; therefore students are recommended in academies and colleges to imitate so eminent an example. One man in a million might get along on four hours of sleep; all the rest would do much better on eight. These people say man is what circumstances and education make him; phrenologists say man inherits certain tendencies which constitute his nature; circumstances and education only modify it. No man is so low, who is above idiocy, that he may not be improved; but the influences which are brought to bear upon him should be carefully adapted to his peculiar nature and disposition, if the best success in his culture is to be attained.

Ten thousand young men having all the opportunities for acquiring an education so far as time, money, and earnest effort are concerned, fail to take a good rank as scholars, because they are taught according to a rule that may answer for seven persons in ten; but the rules are not at all adapted to them, and, therefore, they waste their time, their strength, and their money in misdirected efforts to obtain education and distinction. And some we may say are trying to break their way through who never should have made the attempt, but who could have been successful as farmers or mechanics. Many parents are ambitious that their children should become professional men, and having made money enough to pay tuition bills, try to push them through college. The phrenologist would tell them the truth in the case, and perhaps be snubbed with the old remark, that "if the boy studies hard enough he can succeed."

JAMES MC CREA.

GENIUS AND LABOR.

OH, the dire inconvenience of having to associate genius with manual labor!

Now, this morning, Sam was giving the third finishing coat to that poem he has been completing for eight days, and just as the intellectual steam was making off with Sam, whither none could tell, at a speed unrivaled by Franklin's bottled lightning, the old man called out in thunder tones: "Samuel! Sam-u-el! Sam! you villain! Come out of that, and water them calves! Don't you hear 'em a bawlin'?"

Down breaks! Shut off steam, and let Sam off; he has to water the calves!

Oh, great big world, that carries the weight of all our disagreeablenesses as you go a-whirling through space! how many Sams have you on board? A million answering groans from the struggling *I woulds* of earth, convince us there is something wrong with the machine that weaves the life-web.

Our tempers are all naturally sweet and good when we are in our element; conversely, a face all snarled up, and lips that mutter naughty things under the breath, are evidences that the proprietor is "out." Sam was "out" of his element!

He is not lazy, although the old man says he is. Sam thinks he is too, but he mistakes. In fact, he has been taught from infancy to believe that industry consists wholly in two-fisted digging into the soil for nuggets; and any one possessing the audacity to choose a less manual pursuit has always been slurred in his hearing as a shiftless idiot. Thus, Sam has reached his nineteenth year without becoming philosopher enough to find out that he is a fool for believing himself a fool. He has borne the weight of his degradation all these years, conscious of his inability to make labor a success; yet, somehow, supposing it to be his own fault, till his self-accusation has become a chronic disorder, and his countenance a perpetual snarl while at work; not merely because he *must* work, but because he can not bring himself to love labor, and thereby rid his badly-educated conscience of its intolerable burden.

But what is to be done? It is very necessary that the calves be watered, and that some one attend to this duty regularly; and it were a good thing for Sam to know how to take care of them, for the sake of common information. But it is undeniable, that had all the knowledge of all the cattle-dealers that ever made a highway melodious been drilled into Sam's cranium, he would never choose cattle for a profession, but would let the calves die of thirst, while he wrote for the newspaper. What use, then, for him to know anything on the subject more than to write an occasional fine article on "What I know about calves."

Yet here he is, like the million other geniuses on the rack, never knowing when he is going to be hurled from the very top of Olympus down into the lowest depths of the valley of commonplace reality. And then how hard to get back again and feel just as he felt before. Always some sparks would fly off and expire when the flaming dart was thus suddenly broken off, and they were forever lost to the literary world.

Yes, there's something wrong with the machine. No matter how long it has been going wrong, it demands all the more to be fixed right now. Who will get up an improvement in virtue of which circumstances shall be servant instead of master? Who will invent a patent self-revolving life recipe, and be paid for the same in showers of blessings, and a monument after you're dead?

MINNIE MYRTLE, JR.

SELF-IMPROVEMENT.—A want of thoroughness in whatever is undertaken is, perhaps, one great cause of such failures. A practical writer on that topic gives the following good directions: "Never leave what you undertake to learn, until you can reach your arms around it, and clench your hands on the other side." It is not the amount of reading you run over that will ever make you learned; it is the amount you retain. Dr. Abernethy maintained that "there was a point of saturation in his mind" beyond which it was not capable of taking in more. Whatever was pressed upon it afterward crowded out something else.

Every young man should endeavor to perfect himself in the science of the business he has chosen. Without this, he must always content himself in the lower walks of his calling. The cost of a few cigars will buy all the books he requires, and his own diligence may be made to well supply the place of a tutor. Without such diligence, the best teacher in the world could not manufacture him into a scholar. If once going over a point will not master it, he must tackle it again. Better give a week's study to a page than conclude that you can not comprehend it.

But though it is wise to give your main strength to your own specialty, you should not confine yourself to such studies exclusively. The perfection of all your powers should be your aspiration. Those who can only think and talk on one subject may be efficient in their line; but they are not agreeable members of society in any of its departments. Neither have they made the most of themselves. They become one-sided and narrow in their views, and are reduced to a humiliating dependence on one branch of industry. It costs nothing to carry knowledge; and in times like these, to be able to put his hand to more than one branch of industry often serves a man a good turn.—*Scientific American.*

MODERN DISEASES.

A WRITER in the Boston *Journal of Chemistry* not long since briefly reviewed the situation with reference to modern diseases and methods of treatment. His conclusions are worthy of another hearing, and we take the liberty to reproduce some of them, as follows:

"A large number of the bodily ailments which afflict the race come from hereditary transmission. The neglects, the excesses of the fathers, which have induced physical weaknesses and organic lesions in their own bodies, find fruitage in their children. Three-fifths of the physical miseries of the present race are hereditary, and as the generations march along in the great procession of life, their transmitted torments will increase in number and intensity unless sanitary rules are better known and observed. The race could unquestionably be physically improved in a large degree, in two or three centuries, if it were possible for all parents to live in strict accordance with hygienic laws. The hope of those laboring for a higher standard of public health lies in this direction. Transmitted poisons can be eliminated and weaknesses removed, and happy will be the race living upon our planet when legacies of pain and mental anguish are no longer left by parents to their children.

"Science has already obtained the mastery over many forms of what are known as zymotic diseases, or those which arise from germinal poisons existing in the atmosphere, in water, and in foods. This class is very numerous and very fatal in tendency. Small-pox, fevers, diphtheria, scarlatina, cholera, some forms of dysentery, are all believed to be zymotic in origin; they are instances of blood-poisoning, the poison coming from agencies external to the body.

"But fevers of all kinds are less prevalent than formerly, owing to a better knowledge of their nature and origin, and when instances occur, the treatment is such, or ought to be such, as to cut short their continuance and change a severe affliction into a comparatively mild one.

"Diphtheria is a new enemy, or rather it is an old enemy which for some reason gets a fiercer grip upon us than formerly. This may be owing to habits of life, or morbid conditions which give the poison a freer scope in the system. At the present moment the battle with this cruel ailment does not result satisfactorily. Still, science is making a clear gain in the contest, and it can not be many years before this disease will be looked upon with less dread than now.

"Scarlatina continues to be 'a monster of most hideous mien,' and inspires dread in every household. Idiosyncrasies of organization have much to do with the fatality of this poison. Elevate or improve the general standard of health, purify the fountain of life, which is the blood, and the fire of scarlatina will burn less fiercely in the children's veins. Although ordinary medical skill is often of no avail, still in a large

majority of cases, the terribleness of the poison is modified by intelligent treatment, and lives are saved. There is ground for hope that in the centuries to come scarlatina will be classed among the curable affections, if its occurrence be not entirely prevented.

"Cholera is no longer looked upon with special dread, as it is certain that its career can be arrested wherever sanitary and medical science holds sway. Personal cleanliness, temperance, proper food, adequate clothing, healthful employment—these are the grand agencies by which the blood is put in condition to resist the introduction of poisonous spores; and when they find ingress the fuel to feed the fires of fermentation is lacking, and but a feeble flame results. Parents must remember that the purity and regularity of their lives give to their children immunity from zymotic diseases; for as is their blood, so is that of their progeny.

"The 'cure' of disease (of the *diseased?*) is rendered possible by certain conditions which, alas, are too often wanting in both adults and children. Medicines, if intelligently employed, are of service to the physician in the care of the sick. The indiscriminate use of drugs will not, however, cure disease, but will, on the other hand, certainly aggravate and complicate every form of physical and mental derangement. The notion that there are simple or compound agents adapted to remove physical ailments under all circumstances is fallacious and absurd. Cures, so-called, do not often result from the use of remedies alone, but from nature's efforts, assisted by proper dietary and sanitary regulations. The tendency of nine-tenths of all diseases is toward recovery. It is astonishing how tenaciously life clings to the frail body, when it is racked with pain or consumed with fever. Body and spirit part only after a desperate conflict, in the usual forms of disease. (The conflict is between the chemical forces on the one hand, and the vital forces on the other, and the destructive chemical forces are most frequently beaten in the fight). It is through vital action that the spirit makes defense, and by it not only are all the strongholds of the body defended, but also the outposts, where the slightest danger is possible.

"The important lesson to learn is how to help Nature in her efforts to care for us. If the indestructible parts of us do not act harmoniously, we are soon forced to yield the body to decay; body and spirit part company. Sound health, which comes from an observance of Nature's laws, is the greatest earthly blessing. There is no occasion to talk of *cures* where there is no *disease;* and while it is impossible for us to live superior to accidents, it is possible to help Nature better than we do in her care of our bodies."

THE USES OF SALT.—No. II.

Unsalted Missionary—A Very Pretty Theory—Vital Action Superior to Chemical Action—Thrown Out—Chronic Disease—Persons who do not Use Salt—"All the Animals Eat It"—What it is Good For.

WE have seen the fallacy of the plea that we must use more salt than we find naturally in our food, because we find a greater proportion of it in all the tissues of salt-eaters than we do in their unsalted food. The plea, then, that we must add salt enough to our food to furnish this observed quantity of salt in the system, is worth no more than the argument that we must use alcohol or tobacco enough to saturate our systems to the same extent as those of the tobacco-users and liquor-drinkers.

UNSALTED MISSIONARY.

By the way, too, it seems that our cannibal friends recognize our saltness very much as they do our saturation with tobacco. It has long been a standing joke that cannibals would not eat the carcass of a tobacco-user. Sydney Smith humorously represents a native Polynesian chief as best able to show his hospitality when he had "cold missionary on his sideboard," but we are now informed that these fastidious epicureans

"greatly object to the distasteful and perhaps unwholesome saltness of their European visitors when cooked as food, in contrast with whom their own countrymen have quite a sweet and agreeable flavor." However consoling this might be to those who would perchance prefer cremation to the prospect of walking the earth a second time in the form of a New Zealand cannibal, we are not aware that the latter ever takes the pains to taste his prey *before* he kills it. We think it would hardly pay to salt one's self down alive to spite our possible captor after death, and disappoint his taste when it would be too late to save ourselves. If we did so, however, we think we should prefer to "cram for the occasion;" and for the rest, ask how it is that the Polynesians, without salt, enjoyed the vigor and vitality for which they were noticeable before the advent of Europeans. But the example of these and many other tribes and nations who never use salt, and of such individuals among ourselves, and the fact that the best scientists acknowledge that they do not know of what use salt is in the human system, do not prevent some ingenious people from projecting

A VERY PRETTY THEORY,

and talking about it as if it were all true. In the first place, they assert that a large quantity of salt is required to furnish the hydrochlotic acid for gastric digestion, that there would not be anything like sufficient if we did not add salt to that naturally existing in the food. Youmans suggests the *possibility* which one of our latest cyclopedia writers (whom we happen to know is much more of a chemist than a physiologist), takes up and asserts as a fact, and this is the shape in which he presents it, with none of Youmans' "highly probable" about it: "In the ordinary process of digestion a given portion of salt is used over and over again in the animal system. The salt yielding up its chlorine, the latter combines with hydrogen and forms hydrochloric acid for the gastric juice. The sodium set free, combines with oxygen and forms soda, which passes to the bile and pancreatic juice. When the gastric juice and the bile, having served their respective functions, come together in the lower intestines, the hydrochloric acid and soda are mutually decomposed and reproduce the chloride of sodium or common salt. This is taken up by the absorbents and returned to the system to again undergo decomposition," and go through the same process as before. All this while the blood, the urine, the sweat, the tears, and other secretions are loaded down with salt which they have no use for and are constantly throwing it out. This may be all we could expect from a chemist, though a far greater chemist than he has said that such processes as the decomposition and recomposition of inorganic substances have no place in the living organism of animals, that this organism is controlled by vital and not by chemical laws.

VITAL ACTION SUPERIOR TO CHEMICAL ACTION.

When chemical action is strong enough to find a place in the living organism, it tends to destroy vitality, which is supposed to be the cause of the "action" of poisons in the living system. When the vitality has departed, then the system is given up to the laws of chemical action and reaction, which eventually restore it to its original elements as they existed before they were taken up by plant life.

Now the point for which we are contending is not that there is no salt in the normal human system, but that the full amount required may be, and according to the rules of vitality, should be, furnished in an organic form with the organized matters which we take for food. When we see how easily is furnished the phosphate of lime, of which the system uses so large a quantity, but which we are never required to take in the form of a salt, may we not well hesitate to insist that all the chloride of sodium we need can not be furnished in the same way? We should be led all the more to think it not impossible from the fact that so much salt is present in all the tissues for which we can assign no necessity and see no use, and from the fact also that large quantities are so freely and continually

THROWN OUT

by all the liquid secretions. We have seen that it loads down the urine, the sweat, and the tears, in what are supposed to be conditions of health. Is it possible that the system can perform all this work of carrying through the circulation so much extraneous matter (if it be extraneous) without injury? Examine carefully what Brinton says about it (Food and Digestion, Eng. ed., page 336): "Indeed the excess seems easily to pass out by all channels; not only, for instance, by the healthy excretions, but even by the effusions of disease, in which its proportion seems often increased. In this way the fluid of ascites [dropsy of the peritoneum] is often highly salted, or the sputum of pneumonia exhibits a quantity of this chloride, which goes far to explain its contemporaneous deficiency from what is ordinarily its chief channel of removal from the body, to wit, the urine. A proportion of such an habitual excess is, however, left in the body, most of the tissues of which probably become impregnated with a quantity of salt far larger than would suffice for the most vigorous health."

Is it not reasonable to suppose that these and other diseases may sometimes be caused by the efforts of the system to get rid of this foreign substance? It certainly looks like it. True, this is but a theory, yet as a theory it is far more probable than that it can be taken in and thrown out of the system as an excess or an unnecessary substance without injury. And if this be kept up year after year, we have a right to expect, according to the laws of our organization, that it should cause

CHRONIC DISEASE.

Exactly what forms of disease it does cause we are not prepared definitely to say, because investigation hitherto has not led in that direction. Men have almost always taken for granted that salt was necessary, a much larger amount than we get with our common food, following the reiterations of the early writers on the subject who settled their theories according to men's practices, and not according to their demonstrated needs. One thing we have already noticed, the running sores of the negroes, and they are not the only ones who have running sores that are supposed to be incurable. If these sufferers should put less salt, or rather no salt, into their food perhaps they, too, like the negroes, might get well. Dyspepsia is said to be cured by salt; perhaps in much the same way as we have known headaches to be cured by tea and many other diseases "by a hair of the dog that bit him." It is a fact at least worth noticing in this connection, that the French, who seldom have dyspepsia, are credited, according to authentic statistics, with using only from fifteen to nineteen pounds of salt each per annum; the British twenty-two; and the Americans, the most dyspeptic people in the world, with fifty pounds each per annum.

We noticed in the above quotation from Dr. Brinton that "the sputum of pneumonia exhibits a quantity of this chloride." Now we utterly decline to suggest that salt-eating always produces pneumonia, but we have known many cases where people who entirely gave up eating salt are also entirely cured of a tendency to "take cold," and the cases are so numerous that we think the coincidence can not be merely accidental. But we are also *decidedly* of the opinion that lung diseases of all sorts may arise from various causes, and that it is not at all necessary to suppose that the use of the mineral chloride of sodium is the only cause, in order to show the advisability of examining the subject to see whether or not it may have some influence. If it but creates a tendency in that direction it is well worth the while to know it in a climate where we are so greatly subject to this class of complaints. We have just referred to

PERSONS WHO DO NOT USE SALT,

and we mean just what we say. There are such people living in high health and in considerable numbers not only in Polynesia and in ancient (!) Dutch prisons, but in America, and so nearly within reach that we may observe them daily for months and for years. And when we say that they do not use salt, we do not mean simply that they do not add it to their already salted food at the table, but that the mineral chloride of sodium is *never* added to their food

before, during, or after cooking. According to the theories of the salt-eaters, such people should be dyspeptic, indeed quite unable to digest their food, they should take no pleasure in eating, they should die slow and lingering deaths, if indeed they are not devoured alive by worms engendered in their own stomachs.

But none of these things have happened! On the contrary, they have usually improved in health and digestion, and in the enjoyment of their food. They have learned the truly delicious natural flavors of things which they had never before been able to perceive. We must also truly add that this change has seldom been made by itself. It has been accompanied usually by more intelligent care in diet, dress, exercise, bathing, and general hygiene, so that it would be difficult to state what proportion of the improvement has been due to the relinquishment of salt.

Several things, indeed, have been discovered by the temporary slight addition of salt to their improved diet, and, to their surprise, one of the most constant first effects was a marked salinity of sputum, sweat, and tears. This shows, at least, that the system is not suffering for want of salt. Instead of the small quantity taken being retained and used, it is thrown out with a celerity suggestive of increased vigor of health and consequent promptness in the expulsion of intruders.

But have the scientists who so unanimously declare the necessity of a large amount of salt added to our daily food heard of these cases? Some of them have; and these, after all their declarations, graciously say that probably such people get all that is necessary for them from their food, in which it exists as an organic constituent!

Very good. That is all the negative ask. We never have seen any necessity for the experiments that elaborately extract all the natural salts from food, and then undertake to show from the lack of adaptation in these foods to the wants of the vital economy, that salts were necessary. What they are called upon to show is that there is any necessity for adding the mineral salt to any food whatever, excepting to make it conform to a *taste* that is accustomed to it. Of course we feel ourselves justified in taking the ground that man's taste is largely artificial, and that anything we are pleased to call instinct in this matter has no applicability to man in his present condition. But, says the objector,

"ALL THE ANIMALS EAT SALT."

How many? You can count them all on your fingers. We are aware that there is here quite an extensive and amusing field for observation and experiment, but we consider it quite irrelevant to the question of its use by man. We notice that most of the scientific writers urge that "all the animals" need it in order to perform gastric digestion, which indeed, in a vast number of cases, depend on the same conditions as in man. And yet, all the birds, all the quadrumana, most of the quadrupeds (excepting those which "divide the hoof and chew the cud,") and we believe all the still lower animals reject salt. To many of them it is rank poison, and causes speedy death. The ox, bison, antelope, and sheep, with others of that class, are not "all the animals," and it does not follow that because they eat salt man should. The analogy does not apply any more than it would in the case of grass. Another "argument," still more strange, we notice, not because it is an argument at all, but because it is a sophism. We are told that Nature in nearly all parts of the world has wonderfully provided us with salt, "and

WHAT IS IT GOOD FOR

if not to eat?" What a waste of good stuff, to be sure! But let us see what becomes of that which we do not eat.

First, it helps to make mountains. Second, it is a good fertilizer for asparagus and cabbage. Third, it kills vermin. It "is supposed" that it will kill even the potato bug! Fourth, it keeps the ocean sweet! And if this is not use enough for one chemical, must we needs be called upon to "eat it, because we do not know what else to do with it?"

Now if salt-eating has gained the argument, judge ye. We have honestly sought for the best arguments that we could find in its favor, and we find none that will bear examination. Instead, we find facts strongly suggestive of the propriety of investigating in order to find out *what harm* salt-eating does.

JULIA COLMAN.

A TALE OF CONSUMPTION.

DR. DIO LEWIS, who has been living in California the past year, publishes a pleasant story with the above title, in the *Mining and Scientific Press*.

"Thirty years ago, and while I was practicing my profession in Buffalo, N. Y., Henry S—, a slight, pale, young man, presented himself one morning, and asked me to examine his lungs. The examination over, he scanned my face with eager solicitude, and in a trembling voice, said: 'Nothing there but a little bronchitis or something of that sort, is there?'

"I did not reply at once, and during the silence it was painful to watch his face. I asked:

"'Are your parents living?'

"'No, they are both dead. My mother died when I was six weeks old, and they say she died of exhaustion. My father died of bronchitis. The doctors pronounced it a complication of dyspepsia and bronchitis, but they all agreed there was no consumption about it. And I might as well tell you, that I had a sister, and she is dead. Her malady the physician called *marasmus*. So you see, there is no consumption in the blood. I don't know as there was any use in my troubling you with my little ailments. I should soon be all right again, of course, but I have a friend who is sort of fidgety about me, and I promised her that I would drop in sometime, when I happened to be passing your office.'

"Poor fellow! my heart ached for him. I suppose that during my 35 years of medical experience, I have met a thousand victims of consumption, who, like this young man, tried to shut their eyes so that they should not see. I resolved to be honest with him, and as tenderly as possible I said:

"'I am sorry you are trying to deceive yourself. You must learn the truth soon; why not see it now while there is time to do something? You are probably mistaken about the malady of your parents and sister, but nothing can be more certain than that *you* have genuine consumption. You seem to be a person of spirit and courage. If I am right it is, perhaps, not too late to turn aside the shaft. At any rate, the only chance of escape lies in clearly comprehending the danger, and with your eyes wide open, boldly meeting it.'

"I may here inform the reader that he gave me the name of the physician who had attended his parents, and I wrote for information. The family doctor assured me that both parents died of tubercular consumption, and the sister, he presumed, died of the same malady.

"I advised my patient to take a vacation, and come to see me daily. On the following morning he brought with him a pretty, modest girl, who told me, with many blushes, that she had a right to be interested in everything that concerned Harry. He had not told her my opinion of his case, but had brought her to hear from me the dreadful news. It has been very rare in my experience to witness anything so touching as her grief when I told her that her friend had the consumption."

"'Is there no hope?' she cried. When I said, 'There is still hope, if certain things can be done,' she replied, with startling energy: 'It can be done! It shall be done! No matter what it is! Nothing shall stand in the way!'

"It does not matter what our discussions were; it does not matter that many difficulties sprung up; it only remains to inform the reader that within a few days two saddle horses were purchased, the young woman's hair cut short, two suits of corduroys obtained, and what seemed two young men, with saddle-bags stuffed with good flannels, left Buffalo for Virginia and the South. I need not tell you how a pulse of 95 came down to 75 in 10 weeks, nor how while riding through Northern Georgia and Alabama these two travelers often made from 20 to 30 miles a day; nor how when they came up the Mississippi Valley the next spring, they were obliged to add two ponies to their riding stock, as their daily distances had become too great for their animals; nor how when they arrived in Buffalo, after an absence of 8 months and 21 days, having ridden on horseback about 4,300 miles, they were the brown-

est and roughest and toughest young chaps you ever saw; nor how one of the young men, with the assistance of old friends, was transformed into a bride with a stunning veil; nor how the two devoted travelers insisted upon sitting for the ceremony on the same horses that bore them away to health and happiness nine months before; nor how the horses were bedecked with flowers, and petted as if they were parties to the new relation.

"I could tell you about these things, and many more which would enhance the interest of the story, but this is not my purpose.

"What I will state is, that Henry S— and his faithful wife kept up, under my exhortations, a daily ride of 10 to 15 miles, and at length came to believe, as firmly as I did and as I do, that the case of consumption must be desperate that can resist a year of life in the saddle."

How to Cook Beans.—The value of beans as food is not sufficiently appreciated. They have even a remedial efficacy in some forms of disease, particularly those of a pyæmic character, like scrofula. They contain an oil which induces a mild activity of the alimentary canal, and thus help to dispose of the effete matter or poison in the blood. Most people think they know how to cook beans, but there is scarcely one in a hundred who can produce an excellent dish of them for the table; and as ordinarily brought on they are utterly unfit for the human stomach. Rarely cooked enough, saturated with salt, pork, and grease, they become an element hostile to normal gastric action, and where frequently eaten they will destroy the solvent power of even the strongest stomach. There is a close-grained tenacious hull upon both beans and pease. This hull is composed of cellulose or woody fiber, to dissolve which a long-continued and rather high temperature is necessary; and unless it be dissolved this shell can not be digested. The cooking process must dissolve it, else the mass must be strained or sifted so as to remove the skin. If beans are cooked in a double boiler—a boiler having a water-jacket—as they should be, they can be kept on the fire all day without burning. We do not approve of baking as a mode of cooking beans and pease, for the reason that it is not sufficiently thorough; they need water, and a good deal of it. A soup is the best form of bean food. It should be made quite thin and strained, and should form, when cold, a solid jelly. Such bean food eaten with a little cream and sweet bread is delicious. D.

PAT'S CRITICISM.

There's a story that's old,
But good if twice told,
Of a doctor of limited skill,
Who cured beast and man,
On "a new-fangled" plan,
With the help of a strangely-made pill.

On his portal of pine
Hung an elegant sign
Depicting a beautiful rill,
And a lake where a sprite,
With apparent delight,
Was sporting in sweet dishabille.

Pat McCarty one day,
As he sauntered that way,
Stood and gazed at that portal of pine,
When the doctor with pride
Stepped up to his side,
Saying, "Pat, how is that for a sign?"

"There's wan thing," says Pat,
"Ye've lift out o' that,
Which, be jabers, is quite a mistake:
It's trim and it's nate,
But to make it complate,
Ye shud have a foine burd on the lake."

"Ah! indeed! pray, then, tell,
To make it look well,
What bird do you think it may lack?"
Says Pat, "Of the same,
I've forgotten the name,
But the song that he sings is 'quack! quack!'"

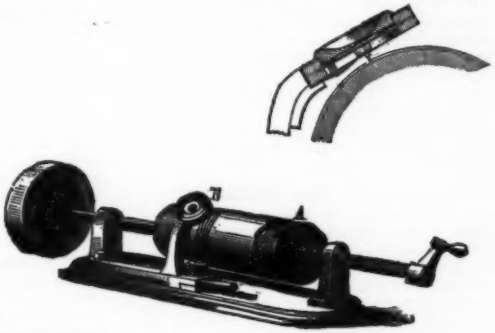
Treating.—Well-bred Parisians never treat. In public resorts, cafes, buffets, etc., the French system of every man paying for his own drinks is strictly observed, save in the case of beggars, who are treated sometimes to a cup of coffee, but never to whisky. In England, men, even the commonest kind, do not treat each other in a public way. They drink together—excessively—but if one man offers to treat another, he will be promptly replied to: "I have money, sir!" Treating is poor business at best.

NOTES ON SCIENCE AND AGRICULTURE.

Grecian Archæology.—We are informed that the excavations of Professor Curtius, the author of one of the very best histories of Greece, on the site of ancient Olympia, have been rewarded by the discovery of a great number of interesting works of art. Olympia, the theater of the famous Olympic games, had, since the time of Pausanias, who described the place in the second century after Christ, become buried under accumulations of mud brought down by the river Alpheus, until there were but few traces of the ancient town left to sight. Some partial excavations were made in 1830, but it was not till 1875 that any thorough work was undertaken—the German Government having appropriated the sum of $75,000. The chief work accomplished is the thorough exhumation of the temples of Jupiter and Hera. The town was once said to have three thousand statues. The total result of the two seasons' excavation amounts to nineteen marble statues belonging to the eastern pediment of the temple, and fourteen belonging to the western—the work of Paionios and Alkamenes, the eldest pupil of Phidias; the temple of Hera and one of the masterpieces of Praxitiles; four sculptured metopes from the great temple; fifteen colossal statues of the Roman period; one hundred inscriptions, a great many bronzes, and numberless architectural remains in marble and terra-cotta.

Photographing with Lightning.—Mr. A. J. Jarmin communicates to the *Photographic News* an account of experiments made to take negatives during a thunder-storm. He sensitized a plate in the usual way and placed it at the back of a negative. Four flashes of lightning were counted, and upon developing, the image came out as clear and quick as if taken by ordinary daylight. One flash with a weak negative gave a fair transparency. He next tried with the camera, after getting everything nicely in focus, through the studio window, which was done by the aid of lightning, he obtained a photograph with twenty flashes, the view being down a street. The experiment proves that the chemical process of lightning is equal to the electric light produced artificially and nearly equal to daylight. Photographs of the electric spark itself have been taken by aid of a Ruhmkorf coil.

The Phonograph. In the sketch which we gave a few months ago, of Mr. T. A. Edison, the electrician and inventor, we gave a brief description of the telephone, and intimated that Mr. Edison had nearly perfected an apparatus for the reproduction of human speech. Since that time the instrument has been brought before the public and its capabilities demonstrated to the astonishment of every one who has had an opportunity of observing its workings. In the telephone, electricity, or the galvanic battery, is necessary to its operation. In the speaking machine, or the "phonograph" as it has been designated, the battery is not essential, it being a simple mechanical affair, allied, however, to the telephone, because, like it, a metallic diaphragm, capable of receiving and transmitting sound-vibrations, is the important feature. The illustration conveys a good idea of the character of the apparatus, which consists of a brass cylinder several inches in length by three or four in diameter, mounted on a long horizontal shaft or axis, to one end of which a crank is attached. This shaft works in screw bearings, so that when the cylinder is revolved it receives a forward or backward movement; the threads of the screw are about



THE PHONOGRAPH.

one-tenth of an inch apart, giving a slow to-and-fro movement. The part marked B in the illustration is the diaphragm of which a side view is given in the separated figure This is composed of a very thin disk of steel stretched across the opening of two brass rings which are screwed together so as to hold it firmly in place. In the center of this metallic disk is a steel or diamond point; this point, of course, responds to the movements of the disk, and if there be a sheet of soft or plaster material arranged to receive the impact of the point, marks or punctures will result in correspondence with the vibration of the diaphragm. It is customary to use thin sheets of tin-foil for receiving the impressions of the diaphragm. These are smoothly wrapped around the cylinder, then the diaphragm is fastened in place by clamping, after the manner indicated in the illustration. There are grooves cut in the brass cylinder at intervals

corresponding with the screw cut in the shaft, and the point of the diaphragm is set so that it will press a little against the tin-foil over the cylinder-groove. By speaking into the mouth-piece or outer opening of the diaphragm, the diaphragm is made to vibrate; and if while one is thus speaking the crank is turned, the plastic foil becomes marked along the line of the groove, the impressions made by the steel point varying in depth in accordance with the strength, inflection, and modulation of the speaker's voice. Now, to reproduce the vibrations of the diaphragm, and at the same time the sounds or language which have made the marks upon the tin-foil, it is necessary only to rotate the cylinder in such a manner that the steel point shall traverse the marks which have been made in the foil. The more nearly responsive the diaphragm is to the impulses communicated to it by the voice, the closer will be the resemblance of the sounds produced by the phonograph to the quality and the tone of the human voice. If the machine in its present state be not perfect, it is, at any rate, a wonderful consummation.

Weather Notes.—According to the report of the chief signal officer, the weather for March last was distinguished for a high range of the thermometer, a predominance of cloudy, rainy weather, and the occurrence in some parts of the country of severe gales, particularly in Colorado, Nebraska, Kansas, and also for extended areas of low pressure. There were very severe snow storms in the north-west. The weather on the Atlantic coast was unusually mild and favorable for agricultural operations.

The Size of the Globe.—This has been determined to within a few miles, in what appears to us now a very simple manner. In the first place, every section of the earth is bounded approximately by a circle, and mathematicians divide all circles into 360 degrees. Hence if we can measure accurately the 1,360 part of this great circle, and if, when we have got that measure out into miles, we multiply it by 360, we get the circumference of the earth, that is to say, the whole distance around it. Then by dividing this result by something a little over 3 (3 1416, the ratio of the circumference of the circle to its diameter) we find out how far it is from one side of the earth to the other. This gives us the diameter of the earth. As a result of a long series of observations, it has been found that a degree measures as near as possible on the average 69½ miles. It can be stated in inches, but it is near enough for us to give as a first statement of result that it is about 69½ miles; and if you take the trouble to multiply 69½ miles, the average length of one degree, by 360 degrees, the number of degrees that there are round the earth, you will find that the circumference is something like 25,000 miles, and therefore that the diameter of the earth is something like 8,000 miles. Mark well the words, "on the average." In truth, the earth is flattened at the poles, so that the length of the degree varies from the pole to the equator; and hence the diameter in the equatorial plane is in excess of the diameter from pole to pole. These two diameters, expressed in feet, are as follows: Equatorial, 41,848,389; polar, 41,-708,710.

A correspondent of *The Druggists' Circular* furnishes a formula for a "Good Cheap Paste that will not ferment in warm weather, and which contains no poisonous substance."

Dextrine,	2 ounces.
Acetic acid,	4 drachms.
Alcohol,	4 drachms.
Water,	2½ ounces.

Mix the dextrine, acetic acid, and water, stirring until they are thoroughly mixed; then add the alcohol.

Flower Barometers.—For some time past artificial flowers, called barometers, have been exhibited in a number of our city shops. They are colored with a material composed of chloride of cobalt, which gives them their susceptibility to weather changes. When exposed to sun and dry air, the leaves become deep blue; when the air is saturated with moisture they become pinkish.

The Robin's Food.—In 1858 Professor Jenks devoted a season to determining the character of the robin. He found that in Massachusetts, in March, April, and May, its whole food was insectivorous; from the last of June till October its stomach contained both insects and berries, but after July its diet was mostly grasshoppers. Professor Treadwell, of Cambridge, has demonstrated that each young robin eats more than its own weight each day.

A New Use of Sour Milk.—A new industry has been started in Mansfield, Mass. It is no less than the manufacture of jewelry out of sour milk. This seems a strange anomaly, but it is a fact. The milk comes in the shape of curd from butter and cheese-making counties in New York, and looks, upon its arrival, a good deal like popped corn; but, before it leaves the shop, it undergoes a wonderful change and receives the name of African coral. The secret in making it up is carefully guarded, but it is certain that it is to be heated very hot, during which coloring matter is introduced, followed by a very heavy pressure. Some of it is colored black and called jet, while some appears as celluloid. It makes very handsome jewelry, and is made into all kinds and styles known in the trade.

The Pomegranate South.—"DEAR JOURNAL: I notice in the March number of your valuable magazine, an article on 'Citron Fruits,' in which the writer speaks of the pomegranate, thus: 'It is said to have been introduced into the Southern United States, though we are not informed exactly where.' Perhaps it will interest fruit raisers to know that the pomegranate grows luxuriantly in the latitude of Charleston, S. C., where I re-

member that in my early years the pomegranate was a common fruit in our gardens. The tree was valued both for its beauty and usefulness. It grew to the height and size of a medium-sized apple-tree, and was found in almost every garden. It is a delicious fruit, and as healthful as delicious. I presume it would grow and thrive anywhere below the 33d degree of North latitude. If this little item will interest your readers, it is at your service. Yours truly,

"MARY D. SHINDLER, Memphis, Tenn."

Great Discoveries. — Undoubtedly the most brilliant recent discovery is that of the liquefaction of hydrogen, nitrogen, and oxygen gas, by M. Cailettet, of Paris, and M. Pictet, of Geneva. Nitrogen becomes liquid under a pressure of 200 atmosphere, and hydrogen 280. The cold required for these experiments is estimated at 300° below 0° Centigrade, or more than 500° Fahrenheit.

An interesting paper appeared not long since in the English *Agricultural Gazette*, on the color of animals, and its relation to their health or hardiness. The nature of the food or surrounding earth appears to exert an influence on the color both of animals and plants. Alum directly influences the color of the flowers of the hydrangea, and hempseed causes bullfinches and certain other birds to grow black. The natives of the Amazonian region feed the common green parrot with the fat of large siluroid fishes, and the birds thus treated become beautifully variegated with red and yellow feathers. Young oyster shells taken from the shores of England and placed in the Mediterranean at once alter their manner of growth, and form prominent diverging rays like those on the shells of the Mediterranean oyster.

Agriculture in Japan.—Japan cultivates 9,000,000 acres, one-tenth of her entire area, though about one-fourth of her fertile area. She supports a population of three and a half persons to every cultivated acre. Most of her people live on fish and vegetables; her great lack is live stock. Milk is not used as an article of food, and what few cows there are, are employed for ploughing.—*Baltimore American.*

Location of an Orchard.—Plant on the highest land accessible, and otherwise suitable, because you will have less extremes of heat and cold; more perfect maturity of wood growth; exemption from unseasonable frosts, which injure fruit and foliage; and also exemption largely from the different forms of blight, which results from defective circulation in the tree. Plant on the summit or cool side of the hill, because there you have less changes of temperature in winter and spring, at which time wood growth is most susceptible of injury from the cold. A northerly aspect is preferable to any other; and wind-breaks, if any, should be on the southwest side of the orchard or trees.

J. C. PLUMB.

Intermarriage of Relations.—Mr. George Darwin, after searching investigation, concludes that "the widely different habits of life of men and women in civilized nations, especially among the upper classes, tend to counterbalance any evil from marriage between healthy closely-related persons." Mr. Darwin's views are in a measure sustained by Dr. Vorni's inquiry into the commune of Batz. Batz is a rocky, secluded, ocean-washed peninsula of the Loire Inferieure, France, containing over 3,000 people of simple habits, who don't drink, and commit no crime. For generations they have intermarried, but no cases have occurred of deaf-mutism, albinoism, blindness, or malformation, and the number of children born is above the average. Their simple habits are their salvation, friend Darwin.

A Medical Truth.—The President of a State Medical Society holding its annual session in Harrisburg, Pa., recently, said in the course of his address:

"Neither the self-styled regular school of medicine, with all its accumulated store of three thousand years of knowledge, experience, and experimentation, nor homeopathy, with about sixty-three years of medical reformation, have, as far as I know, as yet struck at the proper object or aim in saving, in the aggregate, human life. What disease has ever yet been blotted out of existence? What malady that existed three thousand years ago is there that is not now to be found prevailing as fatally as then? while the number has largely increased, and some of them have become infinitely more prevalent and fatal. These may be unprofessional ideas; but a man can afford to be heretical upon a subject in which so comparatively little real visible progress has been made. Physicians are battling disease with the small end of the club while they hold the large, unwieldy butt."—*Banner of Light.*

The Paris Workman.—Malet, in his report on the artisan classes in Paris, says: "It is stated that a Paris workman has no grandchildren." This saying he explains in part by the reflux of the working population to the provinces whence they came; but he adds: "There is, however, no doubt that the life led—hard work, dissipation, and drunkenness—goes a long way to account for the fact. Not only is the man destroyed, but his children are weakly and unable to battle with the stern necessities of life. They die out early for want of stamina, and leave in their turn offspring who never come to maturity."

Damp Closets.—In damp closets and cupboards generating mildew, a trayful of quicklime will be found to absorb the moisture and render the air pure; of course it is necessary to renew the lime from time to time, as it becomes fully slacked. This remedy will be found useful in safes and strong rooms, the damp air of which acts frequently most injuriously on the valuable deeds and documents which they contain.—*Maine Farmer.*

Mrs. C. Fowler Wells, *Proprietor.*
H. S. Drayton, A.M., *Editor.* N. Sizer, *Associate.*

NEW YORK,
JUNE, 1878.

THE DECLINE OF COURTESY.

ARE we, as a people, decaying in politeness and good manners? What mean the indifference, off-handedness, and inconsideration which people generally, whether friends or strangers, exhibit toward each other? Do not politeness and courtesy "pay" now as they formerly did? Two men meet upon the street. By their dress and appearance they belong to the "upper" class. They may shake hands, but in that case they evince their cordiality by so much tightness of grip as to give a bystander the impression that they are testing each other's muscular capacity or manual endurance.

"How are you, old fellow?" roars one.

"Right side up; how are things with yourself?" responds the other.

Then they take up positions just where they met in the middle of the sidewalk, and may continue to parley about personal matters for a quarter of an hour, quite oblivious to the fact that they obstruct the thoroughfare, and are an element of annoyance to the streams of pedestrians moving up and down the street.

We enter an omnibus or car, and find well-dressed persons occupying more seat-room than is reasonable, while other persons equally well-dressed are hanging to the straps. We notice some among the sitters and standers in postures evidently annoying to their immediate neighbors, yet exhibiting a stolid unconsciousness of their bearish conduct.

We enter the general waiting-room of a ferry or railroad dépot and find "gentlemen" lounging about, puffing cigars or expectorating tobacco slime miscellaneously, notwithstanding the presence of ladies, and perhaps of other "gentlemen" to whom tobacco is disagreeable. We may find ladies there who gaze upon you as upon a newly-arrived curiosity from Borneo or China, apparently without the faintest idea that they are committing an act of impertinence.

In places of entertainment patronized by upper-tendom, one's ears will be dinned by the loud and frivolous chatter of his neighbors, so that his enjoyment of the performance is marred.

In the services of the church such levity and indifference are exhibited by people who claim to be religious, that a Mohammedan would be confirmed in his idea of the impiety of "Christian dogs." It may be that the agitation with regard to woman suffrage and independence has had much to do with the matter of our lapse from the old chivalric courtesy in our relations with woman. Nevertheless, every one who appreciates the æsthetic side of life must deplore it. An English essayist claims that the manners of women "are indisputably decaying;" that "they no longer silently exact that deference from men which is every woman's natural right, and which no sagacious woman ever forfeits." He goes on further to assert that women have even "corrupted men's manners, and then they complain of the corruption."

In America the spirit of equality diffused by our democratic institutions has much

to do with discouraging the practices of courtesy and sentiment, not because social equality is in its very nature suppressive of polite formalism, but because, as a people, we have not learned the true significance and bearing of social equality, and in the fear of subordinating ourselves to others, we assume manners which are unreasonable and coarse.

Yet we haven't altogether lost the taste for polite bearing, for when we meet a "gentleman of the old school," we inwardly experience a pleasure on beholding his easy, high-bred carriage and delicate consideration for the feelings and wishes of others, and we inwardly or outwardly express our belief that it would be well for us all did we copy his "style."

We are lacking in courtesy, in what is well termed "the poetry of conduct," because our natures are insufficiently developed and cultivated on their æsthetic and moral sides. We study the material, practical, useful, in what we do in a direct business fashion, but give little or no attention to the kind, gentle, graceful, dutiful, and beautiful in manner and language. In a word, we are too selfish. To be courteous and polite we must be generous, and live from day to day with the thought quickening our heart's impulses, "we are happiest when serving."

WILLIAM M. TWEED.

"BOSS" TWEED is dead. The man who ruled the celebrated Tammany Ring of New York city for so many years, enriching himself and his political comrades at the expense of the tax-payers, and boldly conducting colossal schemes of fraud and peculation as if for him there were complete immunity from retributive consequences, died in prison, the miserable victim of disease and disappointment. The amazing proportions of his schemes of plunder made the name of this man notorious the world over but a few years ago when his crimes as a municipal officer was exposed, so that only a very brief survey of his career is needed in this place.

William Marcy Tweed was born early in the year 1823 in New York, the youngest of three children. His father was a chair-maker, and when old enough to help, he was set to work in the shop. It seems that as a boy he did not take kindly to the trade of chair-making, and was given a place in a hardware store. A little later he was sent to a school in New Jersey, where he remained one year, and on his return to New York, became a clerk in a tobacco store. Leaving this business at the end of two years, he joined his father, who had become associated in partnership with another man and was manufacturing brushes. By the time young Tweed had reached his twenty-eighth year, he had saved some money, and then went into partnership with his brother Richard as manufacturers of chairs.

William M. Tweed was desirous to be rich, and dissatisfied with the slow profits of industry, tried stock-speculation, with the result of bankruptcy and large indebtedness, involving his father and brother as well as himself. This failure appears to have decided the future current of his life. He had been something of a ward politician before, and had been somewhat popular with the firemen and "boys," who, twenty years ago, constituted the larger part of the political element in ward affairs, and he deemed his chances good to make politics a business. He was at home in the dram-shops and a profligate in other respects, and knew the mettle of the men whose votes are generally all one way. He worked successfully among his ward associates and was elected

to offices in the city government—even obtained a majority as candidate for Congress in 1852, but found himself out of his element in Washington, and returned to New York to take the place of a member of the Board of Supervisors in 1856, when the preliminary steps were taken for the formation of a system of plundering the city treasury or inventing methods of robbing tax-payers.

As years went on, Tweed gained in power; and when in 1869 the celebrated Tammany Ring was organized, he blossomed into the great manager of councils, courts, and Legislatures, and aimed with his many like-minded associates to accumulate wealth under the mantle of municipal or legal enactments. The audacity and recklessness of the Ring, however, aroused in a few years the slumbering indignation of the better class of citizens, and by a powerful effort, its toils were broken and its members summoned to account for their criminal acts. The celebrated Ring trials will ever remain a signal feature in the history of New York city.

Tweed was tried three times before being convicted, and then served out but one term in the penitentiary. On his release, however, he was arrested and confined in Ludlow Street jail, from which he escaped and found his way to Spain, where he was arrested after nearly a year of restless wandering and brought back to New York and replaced in the Ludlow Street prison. There he remained until his death. Strenuous efforts were made to procure his release, but were unavailing—the power of the "Boss" had departed. He probably deemed his authority and influence unlimited eight or nine years ago, and seems to have died without perceiving the enormity of his crimes, or appreciating the inevitable tendency of dishonesty to destroy the guilty. Just before he died he said, "I have had bad luck. I have tried to do some good"—language indicating either a deranged mind or an absence of moral discrimination. His public career indeed shows him to have been conspicuously lacking in the sense of moral accountability, and points warningly to the habits and associations of his youth as to influences which gave color and direction to his warped mental development.

FROM HEAD TO FOOT.

DR. Delauney, whose observations on the relation of the size of heads to their intellectual ability have made him conspicuous among the savants of Paris, has been giving attention, lately, to the feet of man, considered in his racial and individual states. He concludes, that the part of the body upon which we stand has a good deal to do with that mental property which we are wont to term "understanding," and endeavors to indicate some of the marks by which one may be enabled to judge others. "In the same people," he says, "the foot is shorter and more arched among the high classes than among the low. . . . . It is smaller and more arched among city folk than among country folk. . . . . The old ruling classes which are in the way of degeneracy, show feet which lengthen and flatten at the same time that their volume of head diminishes; and 'cracked heads' (brains) have feet almost flat, and if their feet appear to be arched it is because they wear shoes with high heels which hide at once the flatness and length of their feet."

Here the doctor aims a hard blow at a fashion which has prevailed for some time, and found votaries, especially in the lower classes of society in Europe and America; the same people taking to the high heel who

were the first to adopt the abominable mode of wearing bonnet or hat low down over the forehead. It would be inferred, naturally, that "high-steppers" are not given to high heels, just as your "high-headed" people scorn to wear head-gear which flops down over their eyebrows. Certain it is that well-informed, judicious people are not inclined to deform and injure their feet and legs by wearing tight shoes with heels two inches high, or to hamper their view of the world around them by an overhanging hat-brim. On the whole, we think that the French observer has shown a good deal of reason in the manner of making human *extremes* meet.

Our Mentorial Bureau.

"He that questioneth much shall learn much."—*Bacon.*

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY *will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.*

IF AN INQUIRY FAIL TO RECEIVE ATTENTION *within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.*

WE CANNOT UNDERTAKE TO RETURN UNAVAILABLE *contributions unless the necessary postage is provided by the writers. In all cases, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage—stamps being preferred. Anonymous letters will not be considered.*

EXPRESSION OF MOUTH.—M. E. L.—The shape of the mouth which you specify as belonging to Lord Derby is largely due to the effect of the engraving. The lower lip in the original card, from which the portrait was engraved, projects somewhat. This indicates that the owner possesses a good degree of self-reliance, colored with a measure of pretension, or the aristocratic sense. In Fig. 10 of the same article in which the portrait of Lord Derby appears, you will notice a similar extension of the lower lip. In the lady's case it is even more strongly manifest, but her self-reliance has a close relation to the sense of worth, independence, individuality, personal ability.

HEART, MIND, AFFECTION.—G. B.—*Question:* Has the heart anything to do with our thoughts or our affections? As we often hear of "broken hearts," "speaking from heart to heart," etc.

Answer: In ancient times, when the philosophy of the mind was not well understood, people were accustomed to think that in the organic centers of the body were to be found the sources of emotion. Hence, many of those quotations about the heart, bowels, and so on. Now it is understood that the brain is intimately related to the body to such an extent, that the excitement which may pervade it, impresses special actions upon the centers of physical vitality. When we are wrought up by any stress of feeling the heart beats tumultuously. In deep grief the stomach refuses to digest our food. It is the mind which produces such effects; and its instrument, the brain, being excited or inflamed, impresses a similar character or tone upon the circulation of the blood, and so affects the physical centers. Men become dyspeptic who get into the habit of eating at times when their minds are intensely occupied by business cares or other considerations, for the reason that there is not enough of blood circulating in the vicinage of the stomach to maintain its normal action, the brain monopolizing the current of life, on account of the predominant exercise of certain organs.

UNIVERSAL LOVE.—J. L.—Your Conjugality is probably weak in its influence, while Amativeness and Friendship are strong. Bring into exercise your intelligence and sense of duty, and so control the general tendency of your affections.

MOLE ON THE FACE.—C.—Have you shown the offending blemish to a good surgeon? It is possible that it may be of such a nature as to be removable without occasioning much inconvenience. Ordinary moles, however, are not removable when one has reached adult life. We think that parents are very remiss in regard to such matters. Many are afraid of occasioning

pain, and so they permit their children to carry into adult life what becomes for them a permanent occasion for mortification.

GENIUS.—W. M. F. C.—We have not met with any pamphlets discussing the negative side of the question you propose—"Is genius hereditary?" But we have heard it often said that the essence of genius is industry, the meaning of such a statement being that the best results to man as an individual and to society, are derived from earnest, plodding work. We believe that what is generally understood by *genius* is largely due to organization, and therefore is hereditary.

TRAVEL AND NERVOUSNESS.—S. J. H. —Out-of-door life intelligently conducted is one of the best methods for relieving nervous excitability. Travel is excellent for such a purpose, particularly travel in regions where the interest is abounding. One is thus drawn out of himself, and so forgets most of his weaknesses, and nature, unless overwrought, has an opportunity to rehabilitate herself.

IMPROVEMENT IN LANGUAGE.—If you will read the orations, speeches, etc., of prominent men, committing passages to memory, and reciting them with care, besides reading carefully the works of leading authors, particularly essays, you will in time greatly improve your faculty of Language. You should have opportunities for discussion and debate. Join some literary association and take an active part in its exercises. *Practice* is essential for facility of expression.

ARCTIC FOOD.—G. A.—It would be necessary for the inhabitants of the Arctic regions to eat such food as they could get. In Greenland, and farther north, the opportunities for obtaining a supply of vegetable diet are few, hence the people who make their home amid such scenes of sterility are compelled to subsist mainly upon flesh. Exposure to extremes of cold demand that the diet shall be largely constituted of the carbonaceous element, to supply needed warmth to the blood. Some kinds of vegetable food are rich in carbon, particularly those which contain a great deal of saccharine matter. Pease, beans, rice, corn, and potatoes are largely composed of carbon, and are very good food for people in winter. Many people make the mistake of adding oils, gravies, fat, to the dressing of pan-cakes in winter, besides sugar or syrup, which is quite a sufficient addition of carbon; consequently, we find that on the approach of warm weather there are many cases of catarrh, fever, or other sicknesses due to bilious derangement.

WEAK MEMORY.—Read only that which is good and profitable to the mind. Perhaps you have been disposed to peruse trashy story-papers and novels, and they have greatly weakened the intellectual constitution. When you read, devote yourself to the occupation for the time. A late number of the PHRENOLOGICAL JOURNAL contained some excellent suggestions for the improvement of the memory. You must have seen it.

BALDNESS.—N. C.—The tendency to baldness is constitutional, although that unpleasant cranial condition may be hastened by improper habits, such as wearing close-fitting hats, keeping late hours, carelessness in diet, drinking alcoholic liquors, strong tea and strong coffee, smoking, etc. We think that a good brush, not too soft, and clean tepid water, will strengthen the hair as much as any application.

WANTS TO INCREASE HIS SIZE.—LEX. —The matter of stature is of course constitutional in the main. If you are the offshoot of tall parents, you should be like them physically, unless there were some physiological difficulty which contributed an abnormal tendency to your growth. It is said by some physiologists that the use of tobacco will retard one's growth. A friend of ours who is of medium stature, while his brothers and sisters are all tall, insists that his shortness is the result of the early practice of smoking and chewing. Exercise a good deal out-of-doors; endeavor to stretch up, being careful, however, not to strain yourself.

ORGANS OF LANGUAGE.—J. L. S.—The researches which have been making for several years past in relation to the phenomena of aphasia, have resulted in the establishment of a center for Language in the left cerebral hemisphere, neighboring the part known as the Island of Reil. Now it is generally understood that the left hemisphere of the brain controls the action of the right side of the body, and as people are disposed to exercise the right side of the body more than the left, the natural outcome of such condition is that the left hemisphere of the brain should obtain predominance in the brain economy, and its centers be more assertatory of function. Some physiologists, however, acknowledge that it is not satisfactorily demonstrated that the center for language exists only in the left hemisphere; that there are cases in which sympathetic indications point to the part having a similar function of the right hemisphere. The eyes, one or both, are measurably affected in aphasia, and where both are affected it is reasonable to infer that the organic centers of both hemispheres are diseased or deranged.

A NAME FOR THE BABY.—A correspondent wishes to obtain a tasteful name for her girl-baby. She feels very properly dissatisfied

with the prevailing names borne by children, large and small, and asks for some suggestions from our lady readers. How would one of the following, which are rarely met with, answer? Alma, Elline, Beatrice, Hermine, Lucia, Edith, Rinna.

TENACITY OF LIFE.—W. H. L., M.D. —Tenacity of life, we think, is indicated by the depth of the middle lobes of the brain below the line of the base of the anterior and posterior lobes of the brain, while mere physical force or vigor is shown by the width of brain above the opening of the ears.

Several ANSWERS *must be deferred to the next number.*

What They Say.

WHY ARE THESE THINGS SO?—I have never been a good student of Phrenology, in the fullest sense of the word, but have read the PHRENOLOGICAL JOURNAL for a number of years and know something of the principles upon which the science is based. Having been an invalid for a long time I was not out among the people, and did not know their views concerning Phrenology, but supposed they coincided with mine. The time came, however, when I could mingle with the world, and then came the surprise. Nearly every one seemed to think that Phrenology is "the theory that the mental faculties are shown by means of bumps or protuberances on the surface of the skull." Did I talk with a doctor, he would ridicule the science, and make statements that would indicate either his entire ignorance of the subject, or that he was willfully trying to misrepresent. Editors and preachers were the same, and would talk of the materialism and fatalism of Phrenology. Coming across any who claimed to believe in the science, it was found they believed only that part which relates to character-reading. When I went to school to prepare for teaching, the professors would talk of Phrenology and assert that "it is not so accurate as physiognomy;" but the principal of the school, who is also the professor of Mental Philosophy, would not believe it at all, although he admitted he generally formed an opinion of a man when he met him, *by the contour of his head.*

When I asserted that Phrenology included not only every method of reading character, whether we looked at the head, or to the face, form, temperament, and movements of the body, to find the signs of character; and also included mental and moral philosophy, and the manner of developing each particular faculty of the mind; they asserted I was trying to set up a system of Phrenology of my own, and told me so. Not wishing to have the students misjudge the science, the opponents were challenged to discuss the subject; and such an absurd discussion! I fought for the Phrenology of the PHRENOLOGICAL JOURNAL. They fought against the pseudo phrenologist who goes about the country "feeling bumps" for a quarter. In vain did I assert that "bumps" had neither part nor lot in Phrenology. They proved conclusively by Webster's Dictionary that I was mistaken. In vain did I appeal to Phrenologists to prove my point. They brought up Noah Porter and other equally learned men who assert that it does have something to do with "bumps," and wanted to know if I thought Phrenologists were superior to them in learning.

Two questions are ever in the writer's mind: 1st, Why are the people, especially the educated, so ignorant as to what Phrenology is? 2d, Why will men of Dr. Porter's standing assert that "Phrenologists have not proved that the bumps or protuberances of the cranium correspond to the physical traits which it is said they decidedly indicate." I think the educated classes are more ignorant as to what Phrenology is than are the great mass of people, and am pleased to find so specific a presentation of the true theory of brain development as that which appeared in the chapter of "Brain and Mind," in the April number. It will enlighten many. L. C. C.

OUR GIRLS.—How shall we educate them? What life-work shall be provided for them in case they are turned out in the world, as they may be, to battle for themselves? Riches are fleeting, and death often removes the natural protectors. Shall our girls then be utterly defenseless, or shall we provide them with the means by which to acquire independence? Emulation may hurt girls, but inactivity kills them. And we speak not of the physical alone. A father who provides not for the future occupation of his sons, whether in trade or profession, is severely censured when the youth, whose activity must take some direction, drifts into dissipation and wickedness. But the daughters? Have you ever thought that they also have ambitious minds, which, if they have not some object for which to labor, will turn and prey upon themselves? The boy is early taught that the time will come when he must be manly, self-reliant, and self-sustaining. All his education points to this time, and is a preparation. If he fail in one profession, many other avenues are open to him, and in some of these he must find, if not success, at least room for development and an object for which to strive. If he meet trouble he can plunge a little deeper into his work, and drown e'en cankering sorrow. If he

lose in one direction, the world lies before him, and he is free to turn his steps where'er he will. His sphere is not contracted or narrow, and he can choose whatever occupation will best accord with his temperament and talent, and prove most conducive to his happiness. And this is well; we would not have it otherwise.

Let us look now at the course pursued in the education of our girls. They are reared, for the most part, in the belief that woman's chief and final destiny is to *marry*. This is the only ambition cultivated. Parents, friends, and society at large all tend to inculcate the principle. So the education of our girls goes on; a little smattering of the languages; a little music; a great deal of fancy-works; but not enough of anything to enable them to say: "I hold within myself the power to gain an honorable livelihood by my own exertions." There is ever the miserable sense of dependence even for thought. To be sure, there are a few who have dared to step outside their allotted sphere, but these are the "strong-minded and unfeminine."

The superficial education finished, the daughter waits in the home circle for him who is to fulfill her destiny. Perhaps he never comes, or if so, only to deceive. What then? Ah, if the parents could but lift the veil and see! A miserable life spent in complainings and bitterness of soul. Sometimes indeed the mind and body both a wreck. And all for what? Because, this hope gone, their education did not supply that which would satisfy the cravings of the mind—an aim, a something tangible for which to work. Society is slowly working out the problem of the sexes, and ere long the cause which we espouse will need not our poor pencil. We have listened with pleased incredulity to the discussion of the question of woman's work and education, by the learned doctors of our colleges and universities. It is not they who can settle the question as to woman's mental capacity. We must answer it for ourselves.

Parents must weigh well the obligations resting upon them, and see that the intellectual wants of their daughters are satisfied with proper pabulum. Let them but supply for their daughters, as they do for their sons, work which will satisfy not only physical, but mental cravings. It is not good, wholesome, satisfying work that wastes energy and mental fiber, but rather the lack of it. A child fed on sweetmeats exclusively can not be strong, and it is useless to bring up the present weakness of woman's intellect as her normal condition, when her mental diet has ever tended to this end.

Give the girls a chance, and they will develop strength and character. A thorough education, and special training with reference to self-support can not detract from womanly dignity. Give them opportunity, then, to work out for themselves a place and name. Then, if they be called to fill the divinely-appointed position of wife and mother, they will fill it nobly.

Strong, intelligent, and self-sustaining, they will transmit to posterity a worthy heritage. But if, on the other hand, such be not their lot, and they be called to walk through life alone, their lives may still be fruitful of good works and crowned with richest blessings. CHRIS.

CONSCIENTIOUS.—MR. S. H. O., of Glendale, N. Y., writes: "For about twenty years I was a subscriber to the PHRENOLOGICAL or *Water Cure Journals*, and part of the time both. I desire to say that I am strictly a temperance man, not having drank any alcoholic liquors since 1850; and I have a son, now twenty years old, who has never drank a drop; and I can give the above mentioned journals the unqualified credit of producing this good result."

PERSONAL.

A LADY PRACTITIONER OF SURGERY IN DISGUISE.—A Dr. James Barry served as surgeon in the British Army for more than fifty years, during which time he held many important medical offices, and gained an enviable reputation as a cool and skillful operator. He was of a very irritable temper, and, while stationed at the Cape of Good Hope, fought a duel. Notwithstanding frequent breeches of discipline, he attained high rank in the army, served in many parts of the world, and in 1865 his name stood at the head of the list of inspectors-general of hospitals. In July, 1865, the eccentric surgeon died, and the next day it was officially reported that the doctor was a woman. No suspicion of the surgeon's sex seems ever to have been entertained, even by his most intimate associates. In addition to his other accomplishments, Dr. Barry was an inveterate smoker.

THE LATE DR. JAMES B. COLEMAN, of New Jersey, was the possessor of very unusual versatility. He was a practicing physician in Trenton for forty years; lectured at different times on natural philosophy, chemistry, vegetable physiology, and phrenology, and wrote a clever Hudibrastic pamphlet against the Thomsonians; and was specially skilled in surgery. He was also a capital draughtsman, and some of his cartoons were immensely popular. A series of his articles on natural and artificial mechanism were published by the *Scientific American*, and when physician of the State prison in 1841 he originated the plan of forced ventilation of public buildings by means of a blowing-fan. He is said to have conceived the idea of applying the process of electro-plating to forming raised cuts, to be used as wood-cuts in printing.

MR. WILLIAM ORTON, President of the Western Union Telegraph Company, died on the 22d of April. The immediate cause of his death was apoplexy. He was a very estimable man; had won his way to the responsible position he occupied at the time of his death by sheer industry and capability. A sketch and portrait of Mr. Orton were published in the June number of the PHRENOLOGICAL for 1872.

THE EARL OF ENNISKILLEN is stone blind, and the tallest man in the House of Lords, measuring six feet seven inches. He possesses one of the finest collections of coins in the United Kingdom, and in spite of his sad affliction, takes great interest in numismatics. His daughters are also exceedingly tall, being over six feet; yet very handsome, and fine horsewomen.

DR. HICKS, editor of *The Wayside*, was graduated from the Medical Department of the University of Pennsylvania, at the late commencement. He was also graduated from a New York Institute, more than ten years ago. He desires, it appears, to keep posted in the latest ideas and facts of medical science.

PROFESSOR CHARLES F. HARTT, of Cornell University, who went to Brazil to take charge of the geological survey of that country, died recently a victim of yellow fever. He was a native of St. John, N. B., and was one of Agassiz's favorite pupils. He was the author of a work on Brazilian geology.

MR. HAMLIN is the oldest Senator now serving: he is sixty-eight. Mr. Dorsey is the youngest; he entered the Senate when only thirty years old, and has served five years. Mr. Edmunds, who is forty-nine, is the Senator who looks oldest.

ONE JOHN CONNELLY, of Brooklyn, New York, playfully blew some tobacco smoke into the face of his infant son, fourteen months old, a few days ago. The child gasped for breath, fell back unconscious, and died.

JOHN FARWELL, of Houston, Texas, measures seven feet, six inches, in his bare feet. A wretched punster says: "He must be the identical 'Farwell, a long Farwell,' mentioned by our old friend Shake."

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

To deliberate on useful things is a prudent delay.

BE severe to yourself, and indulgent to others; you thus avoid all resentment.

THE worst tyrant in this world is a woman who is superior to her husband, and lets everybody know it.

MOST people will forgive a great man's faults far more readily than they will praise a small man's virtues.

SILENCE never shows itself to so great an advantage as when it is made the reply to calumny and defamation.

POLITENESS is not always the sign of wisdom, but the want of it always leaves room for the suspicion of folly.—LANDOR.

WE must not judge a man by a word or a single action. Life is composed of so many inconsistencies, that he would often take the exception for the rule.

MAKE a firm-built fence of trust,
All around to-day;
Fill the space with loving work,
And within it stay.
Look not through the sheltering bars,
Anxious for the morrow;
God will help in all that comes,
Be it joy or sorrow.

CONSCIENCE is your magnetic needle. Reason is your chart. But I would rather have a crew willing to follow the indications of the needle, and giving themselves no great trouble as to the chart, than a crew that had ever so good a chart and no needle at all.—JOSEPH COOK.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

A PERSON was boasting that he had sprung from a *high* family. "Yes," said a bystander. "I have seen some of the same family *so high that their feet could not touch the ground.*"

A YOUNG lady of Clinton, Ill., sent twenty-five cents and a postage stamp in reply to an advertisement of "How to make an impression," and received for an answer: "Sit down on a pan of dough."

JOHNNIE lost his knife. After searching in one pocket and another until he had been through all without success, he exclaimed: "Oh, dear! I wish I had another pocket, it might be in that!"

A VISITOR at an art gallery being asked whether he preferred pictures to statuary, said he preferred the latter, as "you kin go all round the statoos, but you can't see only one side of the picters."

"HAVE you dined?" said a lounger to his friend. "I have, upon my honor," replied he. "Then," rejoined the first, "if you have dined upon your honor I fear you have made but a scanty meal."

An Aberdeen man was telling his symptoms—which appeared to himself of course dreadful—to a Scotch medical friend, who, at each new item of disorder, exclaimed, "Charming! Delightful! Pray go on!" And when he had finished the doctor said, with the utmost pleasure, "Do you know, my dear sir, you have got a complaint which has been for some time supposed to be extinct. I am so glad!"

Robinson went up to his room the other afternoon, and noticed that there was only one match remaining in the box. "Now, if that shouldn't burn to-night when I come in," soliloquized he, "what a fix I should be in." So he tried to see if it was a good one. It was.

A Kentucky man who went to the Black Hills wrote back to a local paper, saying: "Offer a premium at your coming fair for the biggest fool in the country, and I'll try to get there in time."

Our modern poets may well complain that all the similes have been used up before their time. "White as snow," "white as a lily," "white as ivory," are now general property; but the Welsh poet Davyth ap Gwilym has a completely new image—he calls the maiden of his love "white as lime."

Library.

In this department we give short reviews of such New Books *as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science.*

What Our Girls Ought to Know.

By Mary J. Studley, M.D., Teacher of the Natural Sciences in the State Normal School, Framingham, Mass. 12mo, cloth, pp. 261. Price, $1 50. N. Y.: M. L. Holbrook & Co.

Many books have been published recently which have for their purpose the instruction of young people in physiology, and in that phase of morality which is intimately related to man's sexual life. Dr. Studley devotes her effort to our girls, and as she has had the experience both professionally and socially which every teacher who aims to instruct the young in matters of physiology and hygiene should have, and a rather pleasing manner in imparting her knowledge, she has turned out a really interesting volume. Her aim appears to be to cultivate a better physical type of womanhood in the realization of the fact that upon a solid basis of health can only be reared a noble structure of moral health. The thirteen chapters into which the volume is divided present a connected series of lessons upon personal hygiene, with frequent illustrations drawn from the lives and writings of prominent persons. She has no sympathy with the absurdities of fashion, and shows in language which is often forcible, because of indignant feeling doubtless, how utterly inconsistent with robust health is the adoption of the customs and mannerisms tolerated in good society. The book is moderate in tone, as the author takes no advanced views dietetic or otherwise, yet the information it furnishes renders it of high value to the mother who would direct the attention of her daughters to many personal matters with which they ought to be conversant.

The Mill and the Tavern.—By T. S. Arthur, author of "Ten Nights in a Barroom;" "Three Years in a Man-Trap," etc. 16mo, cloth. Price, $1.25. New York: National Temperance Society and Publication House.

It has become a "second nature" for this veteran author to write temperance stories, and always good temperance stories. In this, his latest contribution to the cause of social purification, he contrasts the results of selfishness and generosity, of acquisitiveness and the sense of duty in the lives of two brothers, one of whom becomes the proprietor of a tavern, the other of a grist-mill. He of the tavern is deemed in the start a lucky man, assured of fortune, while he of the mill is thought to have a hard road before him in the attempt to win a livelihood, saying naught of a fortune. Years pass on, the tavern-keeper becomes demoralized by his business, and goes to his grave a miserable victim of self-indulgence. But the mill-owner grows rich and takes under his protection the destitute family of his self-ruined, self-murdered brother.

Several other stories of similar moral import make up a book as interesting and vivid as talent and experience in writing short sketches can well make them.

Advance Sheets of the new Bryant and Stratton Universal Book-keeping.

The editor or author of this new text-book in the science of accounts—we presume him to be Mr. Packard—has succeeded in imparting a real literary interest to what is generally considered a dry, staid subject; and we do not wonder when he says, that "the seventy pages of matter here submitted have cost the author more study, reflection, and down-right labor, than any five hundred pages of previous work."

Starting with a discussion of the principles governing trade and the accumulation of wealth, he carefully and sharply sets before the reader and student the results of the best thought in

Europe and America. The sources of acquiring wealth by labor, rent, exchange, gift, and circumstance, are analyzed with extraordinary clearness. In chapter four we are shown the necessity for a method of accounts or book-keeping, and what points are involved in a perfect system. Interspersed with the specimen entries for the day-book, journal, ledger, cash-book, etc., are explanations of the why and how of the transactions which the entries record, so that the student is led on, step by step, toward a complete mastery of the science. It has been a matter of complaint in commercial circles that school-taught book-keeping is usually found to be unsatisfactory in every-day business. We do not know how the case stands with the young men who receive Mr. Packard's instruction, but if this text-book be illustrative of his mode of teaching, we can not but think that the faithful student who is graduated by his college, must be well-informed in the principles and practice of true business recording.

PUBLICATIONS RECEIVED.

ALIMENTATION IN SURGICAL ACCIDENTS AND DISEASES: And its general value as contrasted with the value of medicine, by Frank H. Hamilton, A.M., M.D., LL.D., Surgeon to Bellevue Hospital, etc. In this Dr. Hamilton occasionally deprecates the use of drugs in the treatment of the sick, being persuaded that the ministering of appropriate food will be attended by better effects. He says: "Medicines so called are in general far inferior to a warm and savory cup of food as peptic persuaders, and I have seen many patients suffering with nausea and loss of appetite, who have been speedily relieved by the mere omission of bitter and disgusting tonics which have been forced upon their reluctant stomachs."

MUSICAL.—The following recent publications have been received:

THE MUSICAL WORLD: Currrent monthly numbers. From S. Brainard's Sons, of Cleveland, Ohio. These contain a large amount of interesting musical literature, and a variety of new music, some of the compositions being choice bits of thought and taste.

LULLABY, as sung by Fritz. Composed and sung by J. K. Emmet; arranged by Charlie Baker. Publisher, F. W. Helmick, Cincinnati, Ohio.

NEW MUSIC. A Little Bow of Blue: song and chorus, words by E. Carswell; music by A. Lang. Dedicated to the reform clubs of America; price 35 cents. Published by the National Temperance Society of New York.

SONGS OF NORMANDY, potpourri, arranged for piano, by Charlie Baker; price, 50 cents. F. W. Helmick, Cincinnati, Ohio.

CHRISTIAN EXPEDIENCY; or, The Law of Liberty. By L. D. Bevan, LL.B. Published by the National Temperance Society and Publication House, New York. This is a discussion of the principles which enter into human action. It was prepared by Mr. Bevan by special invitation for a "Parlor Conference." Price, 15 cents.

THE COUNCIL FIRE: A Monthly Journal. Devoted to the history, character, social life, religious traditions, government, etc., of the American Indian, and discussing the relations of our Government and people to him; under the editorial management of A. B. Meacham, ex-Superintendent of Indian Affairs. The opening of this new publication promises well. It contains many interesting features.

BRIEF. A weekly Epitome of the Press, for the Home Circle, Travelers, and Residents abroad. This publication of thirty-two folio pages comes to us by the favor of a friend resident in England. It is an admirable epitome of the news of the day from all parts of the world, as well as a synopsis of the doings in scientific and literary quarters Some of our enterprising publishers in this country would do well to examine *Brief*, as we have nothing like it in this country.

IS MODERN EDUCATION EXERTING AN EVIL INFLUENCE UPON THE EYES OF OUR CHILDREN? By A. W Calhoun, M.D., Professor of Diseases of the Eye and Ear in the Atlanta Medical College. A short, but intelligent discussion of a very important subject. Our physicians and educators are waking up to the realization of the extent to which eye diseases exist among children; and we hope that such measures shall be put on foot, by authority, as shall result beneficially upon the eye-sight of the rising generation.

TWENTY-NINTH ANNUAL REPORT OF THE TRUSTEES OF THE ASTOR LIBRARY, for the year ending December 31, 1877, by which it appears that upward of 11,500 volumes were added to this most valuable collection of books during the time covered by the report.

THE WESTMINSTER PARK ASSOCIATION OF THE THOUSAND ISLANDS: Descriptive of the Scenery and Improvements in that picturesque region of the St. Lawrence.

DISEASES OF THE BRAIN AND NERVOUS SYSTEM. By J. Martin Kershaw, M.D., Professor of Diseases of the Brain and Nervous System in the Homeopathic Medical College of Missouri, etc. Part First: Facial Neuralgia and the Visceralgæ.

TOTAL ABSTINENCE FOR THE SAKE OF OURSELVES AND OTHERS. By Rev. Canon Farrar, D.D., F.R.S. As delivered in the Hall of Kings College, Cambridge.

THE SERPENT AND THE TIGER: Address at a great Temperance gathering at Aberdeen, Scotland, Feb. 13, 1878. By Rev. Canon Farrar, D.D., F.R.S.

CAUSE AND CURE OF HARD TIMES. A paper read before the Philadelphia Social Science Association, Jan. 17, 1878, by Mrs. R. J. Wright.

ABSTINENCE FROM EVIL: A Sermon delivered at Glasgow, Scotland, Feb. 18, 1878. By Rev. Canon Farrar, D.D., F.R.S. These three pamphlets are published by the National Temperance Society and Publication House of New York. Price, 15 cents each.

Canon Farrar has lately become among the most conspicuous of English clergymen, and his opinions in theology and morals are quoted everywhere. The strong position which he takes in these addresses is every way worthy of a man of high conscientious feeling and mental culture. He appreciates those duties which grow out of our relations to others, and which St. Paul so well expressed when he said: "If meat (food) cause my brother to offend, I shall eat no meat (flesh) while the world standeth."

A TREATISE ON IMMORTALITY FOUNDED ON BIBLE TRUTHS. By Joseph Wheeler, of Bath, N. Y. In this the author endeavors to show by numerous quotations that the Bible favors the idea of natural immortality.

INAUGURAL DISSERTATION. Zur erlangung der docturwurde bei hochloblicher philosophischer facultat, zu Marburg, eingereicht von Adolph Rambeau, aus Jesson.

THE SALT-EATING HABIT. Its effect on the animal organism in health and disease; a contribution to the study of the rational food of man, by Richard T. Colburn; published for the author by Austin, Jackson & Co., Dansville, N. Y. The bearing of the argument in this pamphlet is against the use of chloride of sodium as an element or accessory in food.

THE SHELTERING ARMS. A monthly publication in the interests of destitute and unfortunate women. A well-written and neatly printed affair, and worthy the consideration of the philanthropic. It represents chiefly the well-known association of ladies in this city called the "Sheltering Arms," of which Mrs. B. F. Corlies is treasurer.

THE WESTERN REVIEW OF SCIENCE AND INDUSTRY, current numbers. This magazine is gaining as an expression of scientific thought, and is certainly creditable to the New West. It is published at Kansas City, Missouri, and conducted by Mr. T. S. Case.

PANACEA FOR HEALING OF THE NATION: The centennial of the foundation of the Government of the United States of North America. Contains extracts from addresses by Washington, and other reminiscences of the early years of our Republic.

APPLETON'S RAILWAY AND STEAM-NAVIGATION GUIDE: Current numbers are on our table.

TENTH ANNUAL REPORT OF THE FREEDMEN'S AID SOCIETY, of the Methodist Episcopal Church, which certainly is an excellent showing of the work our Methodist friends are doing for the negro in the South. May their efforts be abundantly compensated by good practical results.

LIPPINCOTT'S MAGAZINE, current numbers. Published by J. B. Lippincott & Co., of Philadelphia, Pa. We notice a considerable improvement in the literary and illustrative features of this magazine. It is rapidly making its way toward the first place in the front rank of American periodical literature.

THE AMERICAN ANTIQUARIAN (Antiquary?) An illustrated quarterly journal, devoted to early American history, Archæology and Ethnology; edited by Rev. Stephen D. Peter, of Ashtabula, Ohio; subscription price, $3 a year.

THE MAGAZINE OF AMERICAN HISTORY: With Notes and Queries. Edited by John Austin Stevens. Published by A. S. Barnes & Co., N. Y. The number for April contains in its Historical Department a sketch of the Continental Congress before the Declaration of Independence. There is an excellent portrait, with a biographical review of Colonel Peter Force. There are also reprints of original documents of interest to the reader of history; and items and notes of value, because of their connection with the early life of our nation. Price, 50 cents.

GOOD TIMES, No 1, for December, 1878. A new candidate for a reading constituency. Largely in the interest of advertisers. Price 10 cents.

"FOUNTAIN OF SONG." A new collection of hymns and tunes for gospel temperance meetings, devotional meetings, and the home circle, by Rev. Robert Lowry and W. H. Doane. It contains one hundred and seventy-two pieces, comprising many of the popular religious songs, together with a variety of new pieces adapted to the times. "Rescue the Perishing," "Sweet By and By," "Dare to do Right," "Dash it Down," "Who is my Neighbor?" etc., etc., are among them. Price 30 cents; $25 per hundred. J. N. Stearns, New York.